



Notice of Regular Meeting
Cherry Creek Basin Water Quality Authority
Board of Directors Meeting
Thursday, October 19, 2023 at 9:00 a.m.

The meeting will be conducted in-person and virtually as set forth below.
In-person attendance is encouraged due to audio limitations in the meeting room.

In-Person: SEMSWA
7437 S. Fairplay St.
Centennial, CO 80112

Virtual: Zoom
<https://us06web.zoom.us/j/87425775963> Passcode: CCBWQA
Phone (646)931-3860 Mtg ID 874 2577 5963# Passcode: #815374

CCBWQA Board of Directors Meeting Documents can be found online at the link below.
https://drive.google.com/drive/folders/1KqGcDC9eS_gMEdSiXPPPBGefAHTib7pf?usp=share_link

1. Call to Order and Pledge of Allegiance
2. Consent Agenda (5 minutes)
(Items on the consent agenda can be approved with a single motion or, items can be requested to be moved from the consent agenda and moved to the "discussion" or "direction and/or action" section.)
 - a. Approval of the September 21, 2023 Minutes (enclosed)
 - b. Acceptance of the Schedule of Cash Position Dated October, 2023 (enclosed)
 - c. Acceptance of the Paid Claims for September, 2023 (enclosed)
 - d. Approval of Unpaid Claims as of October, 2023 (enclosed)
 - e. Approval of 2024 Agreements (enclosed)
 - i. Cherry Creek Stewardship Partners Proposal Letter
 - ii. Davis Graham & Stubbs Engagement Letter
 - iii. ERO As Needed Agreement
 - iv. Fiscal Focus Partners Audit Engagement Letter
 - v. Pinpoint Systems
 - vi. Val Endyk Administrative Services
3. Direction and/or Action (20 minutes)
 - a. Authorization of IGA Amendment for Cherry Creek at Scott Road (Borchardt, enclosed)
 - b. Authorization of IGA for Dove Creek Construction Phase 2 (Borchardt, enclosed)
 - c. Authorization to Prepare an RFP/RFQ for PAPM Position (Clary, enclosed)
4. Discussion (40 minutes)
 - a. 2024-2033 Capital Improvement Program (Borchardt, enclosed)
 - b. CCBWQA 2024 Draft Budget (Clary, enclosed)
5. Presentations (none)
6. Board Member Items
7. Updates (10 minutes)
 - a. Technical Manager
 - i. Update on October 11, 2023 Meeting with CDPHE Regarding Site Specific Standards
 - b. Cherry Creek Stewardship Partners 3rd Quarter Update and [Events](#) (Davenhill, enclosed)
 - c. TAC (Erickson)
 - d. Contract Staff
 - i. PAPM
 - a. CIP Status Report (Borchardt, enclosed)
 - b. Maintenance and Operations Status Report (Goncalves, enclosed)
 - ii. [Water Quality Update](#) (Stewart, enclosed)
 - a. CCBWQA SAP/QAPP
 - b. Lakeview Drive and Impacts to Flow Calculations
 - iii. Regulatory (see Technical Manager update)
 - iv. Land Use Referrals - [2023 Tracking](#) (Endyk)
 - e. Legal

- f. Other
 - i. December Board Meeting
- 8. Executive Session pursuant to Section 24-6-402(4) C.R.S., if necessary.
- 9. Adjournment

[Board Binder](#)



Cherry Creek Basin Water Quality Authority
Minutes of the Board of Directors
Thursday, September 21, 2023 at 8:30 a.m.

Board Members Present

Bill Ruzzo, Assistant Secretary, Governor's Appointee
Christopher Lewis, Vice Chair, Governor's Appointee
Jessica LaPierre, City of Aurora - Alternate
John McCarty, Secretary/Treasurer, Governor's Appointee
John Woodling, Governor's Appointee
Joshua Rivero, Chair, Town of Parker
Leslie Summey - Arapahoe County
Max Brooks, Town of Castle Rock
Mike Anderson, City of Lone Tree
Rebecca Tejada - Special Districts, Parker Water and Sanitation District - Alternate (zoom)
Ryan Adrian, Douglas County - Alternate
Steve Sundberg, City of Aurora
Tom Downing, Governor's Appointee

TAC Members Present

Alex Mestdagh, Town of Parker
Ashley Byerley, SEMSWA
Casey Davenhill, Board Appointee, Cherry Creek Stewardship Partners
Cayla Cappello, City of Greenwood Village (zoom)
David Van Dellen, Town of Castle Rock
Jacob James, City of Lone Tree
James Linden, SEMSWA - Alternate
Jim Watt, Board Appointee, Mile High Flood District
Jon Erickson, TAC Chair, Board Appointee, Colorado Parks and Wildlife
Lisa Knerr, TAC Vice Chair, Arapahoe County
Rick Goncalves, Board Appointee

Others Present

Alan Leak, RESPEC
Carolyn Nobel, LRE Water
Erin Stewart, LRE Water
Jane Clary, Wright Water Engineers, CCBWQA Technical Manager
Jessica DiToro, LRE Water
Richard Borchardt, R2R Engineers
Tim Flynn, Collins Cole Flynn Winn & Ulmer, PLLC
Val Endyk, CCBWQA

1. Call to Order and Pledge of Allegiance

Director Rivero called the meeting to order at 8:34 am and led the pledge of allegiance.

2. Consent Agenda

a. Approval of the August 17, 2023 Minutes

- b. **Acceptance of the Schedule of Cash Position Dated September, 2023**
- c. **Acceptance of the Paid Claims for August, 2023**
- d. **Approval of Unpaid Claims as of September, 2023**
- e. **Approval of the First Amendment to Muller’s Agreement for the Cherry Creek Reach 1 Alternatives Analysis**

Director Anderson moved to approve the consent agenda. Seconded by Director Downing. The motion carried.

3. **Direction and/or Action**

a. **Approval for Executive Committee to Pursue Level of Interest for Governor Appointees**

Director McCarty requested that the Board direct the Executive Committee to pursue contacting potential candidates for Governor Appointee positions on the Board. Director McCarty and Director Ruzzo submitted the enclosed [memo](#) to the Board providing background information regarding the Governor’s Office of Boards and Commissions’ request that the CCBWQA identify potential candidates for Governor-appointed positions on the Board. Board members should communicate potential candidates to Val Endyk, CCBWQA Administrative Assistant.

Director McCarty moved to direct the Executive Committee to pursue contacting potential candidates for Governor Appointee positions on the Board to determine their level of qualifications and interest in the position and report back to the Board on their findings. Seconded by Director Downing. The motion carried.

4. **Discussion**

a. **2023 CIP Budget Update**

Rich Borchardt provided a [memo](#) to the Board detailing the impacts of increased construction costs and highlighted the possible variance in CCBWQA PAF budget due to inflation. Additionally, some partner projects are being delayed due to the increased costs, which affects projects that CCBWQA had planned to co-fund in 2023. Rich presented three options for replacement projects for 2023 Pollution Abatement Funds. These are projects that were planned for 2024 but that could be moved forward to fill some of the project shortfall to help meet the 60% budget goal for PAP projects. Although the Board would need to approve any project spending, there is no need for the Board to formally amend the 2023 budget.

A draft 2024 budget will be presented to the TAC and Board in October, with a final 2024 budget in November.

b. **2024-2033 CIP Schedule and Update**

Rich Borchardt provided an update on the 10-year CIP budget and reported that he has reached out to partners to coordinate project planning. CCBWQA staff is working on the 2024 budget and will consider how next year’s CIP spending fits into the larger 10-year plan.

Rich Borchardt informed the Board that he will not be renewing his contract with the Authority in 2024, but will assist with a transition period through March of 2024.

5. **Presentations (none)**

6. **Board Member Items**

a. **Request for Board Participation in Reviewing Technical Scopes for 2024 Budget**

Director Ruzzo requested additional Board involvement in the review of 2024 technical scopes to ensure proposals meet the Authority’s goals and objectives.

Director Downing offered to assist the Executive Committee in reviewing 2024 technical scopes.

7. **Updates**

a. **Technical Manager**

i. **Hydros Draft Technical Memorandum to Support Initial Site Specific Nutrient Standards Discussion with CDPHE**

Jane Clary provided a [memo](#) from Hydros describing the Site Specific Nutrient Standards and updated the Board that staff plans to share a draft with the WQCD by email prior to a meeting with WQCD on 10/11/2023. The purpose of the meeting is to present Hydros’ approach to site specific standard development and obtain

feedback from CWQCD. Jane Clary will report back to the Board on the meeting with the WQCD at the October Board meeting.

- ii. **Watershed Plan Workshop [Agenda](#)** (Note: the Board meeting was shortened to allow time for the watershed plan workshop that occurred immediately following the Board meeting.)

b. Cherry Creek Stewardship Partners Update and [Events](#) (Davenhill)

Casey Davenhill provided a report that the Cherry Creek Watershed Conference went well and thanked the Authority for its support. She invited anyone interested to join in the annual fall equinox walk at the Cherry Creek Valley Ecological Park on September 23rd at 9:00 am.

c. TAC (Erickson)

d. Contract Staff

i. PAPM

- a. [CIP Status Report](#) (Borchardt, enclosed)
- b. [Maintenance and Operations Status Report](#) (Goncalves, enclosed)

ii. [Water Quality Update](#) (Stewart)

iii. Regulatory (DiToro, enclosed)

- a. **Informational Memo on WQCC Rulemaking Hearings**
- b. **Reg 93 Data Call Submission**

Jessica DiToro provided an update on the enclosed [memo](#) summarizing the WQCC's Rulemaking Hearing procedures and outlining Rulemaking Hearings that may be of relevance to CCBWQA.

Additionally, Jessica DiToro reported that CCBWQA Staff submitted data to the WQCD as part of the 2025 Regulation #93 RMH [data call](#) that will focus on segments found in Regulation #38 (i.e., South Platte Basin).

iv. Land Use Referrals - [2023 Tracking](#) (Endyk)

e. Legal

i. December Board Meeting (Flynn)

Legal counsel informed the Board that with respect to the Authority's 2024 budget, the uncertainty as to the Authority's final assessed valuation and mill levy created by Proposition HH if it passes can be addressed by delegating to the Authority's budget officer, the authority to make any final adjustments to the Authority's mill levy necessitated by Proposition HH.

f. Other

8. Executive Session pursuant to Section 24-6-402(4) C.R.S., if necessary.

No Executive Session held.

9. Adjournment

There being no further business to come before the Board, Director Rivero adjourned the meeting at 9:08 am.

[Board Binder](#)

Cherry Creek Basin Water Quality Authority
Schedule of Cash Position
September 30, 2023
as of October 13, 2023

	General Fund	Pollution Abatement Fund	Enterprise Fund	Total
<u>1st Bank - Checking Account</u>				
Balance as of 09/30/23	\$ 26,809.55	\$ 26,452.13	\$ 5,754.53	\$ 59,016.21
Subsequent activities:				
10/02/23 VISA Charges	200.00	-	-	200.00
<i>Anticipated Activities</i>				
Transfer from ColoTrust for bills	71,000.00	66,000.00	6,000.00	143,000.00
Bill.com open claims	(71,500.34)	(65,699.97)	(5,805.25)	(143,005.56)
<i>Anticipated balance</i>	<u>\$ 26,509.21</u>	<u>\$ 26,752.16</u>	<u>\$ 5,949.28</u>	<u>\$ 59,210.65</u>
<u>ColoTrust General - (8001)</u>				
Balance as of 09/30/23	\$ 1,385,098.35	\$ 3,028,002.47	\$ 1,542,779.03	\$ 5,955,879.85
<i>Anticipated Activities</i>				
Ptax Arapahoe Cty (Sep)	10,448.42	-	-	10,448.42
Ptax Douglas Cty (Sep)	14,189.30	-	-	14,189.30
Development fees deposits to date	-	-	36,479.00	36,479.00
<i>Anticipated balance</i>	<u>\$ 1,409,736.07</u>	<u>\$ 3,028,002.47</u>	<u>\$ 1,579,258.03</u>	<u>\$ 6,016,996.57</u>
<u>ColoTrust Pollution Abatement - (8002)</u>				
Balance as of 09/30/23	\$ -	\$ 56,510.69	\$ -	\$ 56,510.69
<i>Anticipated balance</i>	<u>\$ -</u>	<u>\$ 56,510.69</u>	<u>\$ -</u>	<u>\$ 56,510.69</u>
<u>CSAFE - Savings Account</u>				
Balance as of 09/30/23	\$ 859,161.30	\$ 42,246.04	\$ 404,055.62	\$ 1,305,462.96
<i>Anticipated balance</i>	<u>\$ 859,161.30</u>	<u>\$ 42,246.04</u>	<u>\$ 404,055.62</u>	<u>\$ 1,305,462.96</u>
Total funds available as of date above	<u><u>\$ 2,295,406.58</u></u>	<u><u>\$ 3,153,511.36</u></u>	<u><u>\$ 1,989,262.93</u></u>	<u><u>\$ 7,438,180.87</u></u>

Effective monthly yield (as of 9/30/2023)

1st Bank - 0.100%* if Balance >\$20,000
ColoTrust Plus - 5.5058%
CSAFE - 5.44%

Cherry Creek Basin Water Quality Authority
Paid Claims September 15, 2023 through October 12, 2023

Process Date	Vendor	Invoice Number	Payment Reference	Amount
9/25/2023	CliftonLarsonAllen LLP	3868084	P23092201 - 8737635	5,421.60
9/25/2023	Collins Cole Flynn Winn & Ulmer, PLLC	Multiple	P23092201 - 8737584	19,605.50
9/25/2023	Hydrologik LLC	INV-230627	P23092201 - 8737632	6,654.56
9/25/2023	Hydros Consulting Inc.	Multiple	P23092201 - 8737578	18,863.50
9/25/2023	LRE Water	23919	P23092201 - 8737624	50,132.29
9/25/2023	Muller Engineering Company	37089	P23092201 - 8737618	21,264.96
9/25/2023	Pinpoint Systems Inc.	10047	P23092201 - 8737614	210.00
9/25/2023	R2R Engineers, Inc.	2023-08	P23092201 - 8737607	20,937.71
9/25/2023	RESPEC	Multiple	P23092201 - 8737575	2,065.48
9/25/2023	RG and Associates LLC	153387	P23092201 - 8737602	907.50
9/25/2023	TCW Risk Management	24WC-54669-0773	P23092201 - 8737597	450.00
9/25/2023	Valerie Endyk	20	P23092201 - 8737591	7,368.75
9/25/2023	Wright Water Engineers, Inc.	Multiple	P23092201 - 8737567	29,380.47
			Subtotal	\$ 183,262.32
Other Payments				
9/20/2023	Costco		Visa	90.98
9/20/2023	King Soopers		Visa	25.83
9/22/2023	Jason's Deli		Visa	596.49
9/25/2023	XCEL Energy		ACH	8,483.03
9/26/2023	Verizon		ACH	51.54
9/27/2023	Google		Visa	1.49
9/28/2023	Summit Partners		Visa	204.00
10/2/2023	Get Streamline.com Website		Visa	200.00
			Subtotal	\$ 8,940.06
			Total Payments	\$ 192,202.38

Cherry Creek Basin Water Quality Authority
Unpaid Claims as of 10/12/23

Invoice date	Invoice	Vendor*	Fund	Chart of account	Invoice amount
3/24/2023	Donation032423	Cherry Creek State Park	10	7440 - District management	\$ 701.06
7/20/2023	Donation072023	Cherry Creek State Park	10	7440 - District management	607.61
8/31/2023	3905210	CliftonLarsonAllen LLP	10	7000 - Accounting	4,591.82
9/30/2023	3905211	CliftonLarsonAllen LLP	10	7000 - Accounting	6,164.78
9/30/2023	4480	Collins Cole Flynn Winn & Ulmer, PLLC	10	7460 - Legal	5,312.00
9/30/2023	855940	Davis Graham & Stubbs LLP	10	7050 - WQCC Regulation Hearings	562.50
9/25/2023	24190	LRE Water	10	Various Budget Codes Gen Fund	40,635.62
9/25/2023	24190	LRE Water	11	7817 - Wetlands Harvesting	4,621.75
9/20/2023	37261	Muller Engineering Company	11	7762 - SR - Reservoir to LV Road	15,276.50
9/30/2023	10063	Pinpoint Systems Inc.	10	7480 - Miscellaneous	453.75
9/30/2023	2023-09	R2R Engineers, Inc.	10	7440 - District management	6,776.25
9/30/2023	2023-09	R2R Engineers, Inc.	11	7440 - District management	11,284.93
8/31/2023	INV-0823-1661	RESPEC	11	7511 - RSS East Shade Shelter	921.38
8/31/2023	INV-0823-1662	RESPEC	11	7440 - District management	562.50
9/30/2023	153478	RG and Associates LLC	10	7415 - District Specific Account	1,856.00
9/30/2023	153478	RG and Associates LLC	11	Various Budget Codes PA Fund	6,600.00
9/25/2023	21	Valerie Endyk	10	7201 - Administration fees	3,787.50
10/31/2023	SEP	Verizon (Estimate)	10	7480 - Miscellaneous	51.45
8/31/2023	67855	Wright Water Engineers, Inc.	40	7677 - District Specific Account	5,574.25
9/30/2023	67905	Wright Water Engineers, Inc.	40	7685 - District Specific Account	231.00
9/30/2023	67906	Wright Water Engineers, Inc.	11	7440 - District management	15,312.75
10/4/2023	847580814	Xcel Energy	11	7818 - Utilities - Reservoir Destratification	11,120.16
					\$ 143,005.56

General Fund - 10	\$	71,500.34
Pollution Abatement Fund - 11		65,699.97
Enterprise Fund - 40		5,805.25
Total Claims by Funding Source	\$	143,005.56

* by vendor



CHERRY CREEK STEWARDSHIP PARTNERS

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303-345-1675
casey@cherry-creek.org
www.cherry-creek.org

October 11, 2023

Thank you for the opportunity to make this proposal to the Cherry Creek Basin Water Quality Authority (Authority). For the past 25 years, The Cherry Creek Stewardship Partners (Partners) have enjoyed a working relationship with the Authority. During that time, we have developed a network that includes 3 counties, Colorado Parks & Wildlife, multiple Special Districts, consulting firms, resource groups and numerous businesses and individuals who all support the work of the Partners and provide modest but consistent financial support.

We have developed an action plan by combining the educational goals of our Partners and watershed permittees, and by working in a collaborative way to implement projects and processes that meet those goals throughout the watershed.

It has been a privilege to work with the Authority and to celebrate the efforts of land use agencies who are working to protect water quality in Cherry Creek and Cherry Creek Reservoir. It is also fascinating to explore and interpret the science of watersheds with the help of experienced professionals and through the eyes of interested citizens.

We propose to continue our Partnership efforts by providing the following:

- Create and host tours, service projects and events that bring water quality professionals together with local citizens to better understand the ecology of Cherry Creek and to implement the Cherry Creek Basin Watershed Plan
- Plan and host the Annual Conference for the Cherry Creek Watershed
- Provide judges and cash awards to students and teachers in collaboration with the Area Health Education Centers and the Metropolitan Regional Science and Engineering Fair
- Partner with other agencies to present accurate and engaging information to the public relating to water quality
- Attend and participate at meetings of the Technical Advisory Committee to the Authority
- Actively engage in partnerships with other identified groups working on water related issues including the Metro Round Table of the Inter-Basin Compact Committee, the Urban Waters Partnership of the U.S.E.P.A, Stormwater Permittees for Local Awareness of Stream Health (SPLASH), Douglas County Cooperative for Local Awareness and Responsibility (D.C. CLEAR) and to provide assistance to other front range watershed groups including Chatfield Area Network, Bear Creek Watershed Organizations and Barr-Milton Watershed Association
- Provide support to Cherry Creek State Park in their education and outreach efforts
- Build a constituency that supports efforts to maintain beneficial uses of Cherry Creek Reservoir and the entire Cherry Creek Watershed, both above and below the dam

We will plan, budget, and deliver as many programs as possible with available resources and request \$35,000 from the Authority this year in support of our efforts which will include the Authority's \$5,000 sponsorship of the Annual Cherry Creek Watershed Conference.

The Cherry Creek Stewardship Partners emerged from the first Cherry Creek watershed forum held in 1998 and have been successful in promoting active stewardship of the Cherry Creek watershed ever since. The Partners formed in response to the need for cross-jurisdictional coordination and communication on watershed issues such as open space, recreation and water quality in our streams and reservoir. We are proud to have the time, talent and financial support of individual citizens and representatives from land use jurisdictions, state and federal resource management agencies, conservation, recreation and historic preservation groups and the business community. We have maintained our energy with extensive participation from the local community and have become the first active group that represents both the upper and lower portions of the watershed. We continue to provide regular information-sharing forums, coordinate and participate in projects and activities that enhance water resources and promote stewardship and community pride.

Best regards, Casey Davenhill

*Cherry Creek Basin Water Quality Authority...Arapahoe County...Douglas County...City & County of Denver...City of Lone Tree... City of Aurora...
City of Castle Pines...City of Glendale...City of Greenwood Village...Town of Castle Rock...Town of Parker...Parker Jordan Metro District...
US Army Corps of Engineers...USGS...USDA Natural Resource Conservation Service...Colorado Parks and Wildlife...Mile High Flood District...Southeast Metro
Stormwater Authority...Douglas County Stormwater Coop...Denver Audubon Society ...Metro Denver Science and Engineering Fair...High Line Canal Preservation
Association...Colorado Horse Council, Inc...Four Mile Historic Park...Cherry Creek Valley Historical Society ... ERO Resources... ICON Engineering...J3 Engineering
Consultants, ...Jacobs Engineering... LRE...Matrix Design Group...Muller Engineering Company, Inc. ...Pawnee Buttes Seed...Pinyon Environmental ...
RESPEC Consulting & Services...RG Engineering...R2R Engineering...Stream Landscape Architecture & Planning...Wright Water Engineers...Valerian, LLC...*

October 12, 2023

Privileged and Confidential Attorney-Client Communication
Via Email to tflynn@cogovlaw.com

Tim Flynn
Cherry Creek Basin Water Quality Authority
c/o Collins Cole Flynn Winn Ulmer
165 Union Blvd., Suite 785
Lakewood, Colorado 80228
tflynn@cogovlaw.com

Re: **Engagement for Legal Services**
Water Quality Rulemakings and Related Environmental Matters

Dear Tim,

Thank you for giving us the opportunity to provide additional legal services to the Cherry Creek Basin Water Quality Authority. The purpose of this communication is to memorialize our understanding of this continued engagement, and to serve as a written supplement to our previous engagement agreement, which will continue to define the terms and expectations of our relationship. Please let me know if there is anything that I, any of the other lawyers working on your matters, or anyone else at DGS can do to better support our relationship.

Client

The client for this engagement is the Cherry Creek Basin Water Quality Authority (“Authority”). This new engagement does not independently create an attorney-client relationship with or any additional duties owed to any other persons or entities, including the Authority’s members or affiliates.

Scope of Engagement

You have asked us to represent the Authority with regard to providing advice on environmental and water quality issues and representing the Authority in rulemaking and other hearings before the Colorado Water Quality Control Commission. The firm’s work on this engagement will be limited to this scope of services unless you specifically request our advice or representation on other issues or projects and the firm agrees in writing to do such additional work. Except as specifically noted above, this engagement does not (1) include advice about your disclosure obligations concerning the matter under any applicable securities laws or regulations, (2) require DGS to investigate or evaluate whether insurance is available for any matter arising in this engagement, or the availability or indemnity of a defense from an insurance carrier or other third party, or (3) undertake any duty to maintain any record or reminder system with respect to any applicable dates in agreements, licenses, or registrations to which you are a party and which may require future action on your part.

Fees and Other Charges

Our fees are based primarily on the actual time spent by the attorneys and other timekeepers who work on your matter and will be determined in the same manner as agreed in our previous engagements. My current billing rate is \$530 per hour. Zach Miller, senior of counsel at our firm, has a current billing rate of \$625 per hour. We might involve others in our firm when, because of special experience, time availability, cost efficiency, or other reasons, they are in a better position to carry out certain responsibilities. Billing rates vary according to the experience of the individuals and the nature of their work and are typically adjusted on an annual basis at the beginning of each calendar year to reflect the experience of our professionals as well as general economic factors. I have enclosed a copy of our 2023 Engagement Terms for your reference.

Conflicts of Interest

As you know, we must be certain that this engagement does not put us in conflict with another client's interests, as provided by the Colorado Rules of Professional Conduct. If a conflict were discovered after we have begun our work on this engagement, we might have to discontinue our work for you. Therefore, it is very important that you tell us now if any other persons are involved in this matter, or as soon as possible if others become involved in the future, so that we can perform additional conflict research. If all involved parties are not properly disclosed, DGS may need to withdraw from your representation.

Termination or Conclusion of Engagement

This engagement will end at the earliest of your or our formal termination of the representation or the completion of our work for you on this matter (dispositively evidenced by a final bill or by a 24-month period of billing inactivity unless otherwise agreed in writing).

If the above correctly reflects your understanding of the expectations of this engagement, please reply to this email indicating your agreement. If you ask us to begin work before you reply to this email, or if we do not hear from you within 14 days, we will consider that this communication correctly reflects your understanding of our representation.

As always, please feel free to contact me with any questions or concerns, or if you would like to discuss ways in which we could handle your matters under a fee arrangement that is different than on a billed hour basis.

Sincerely,



Andrea Bronson
Partner
for
DAVIS GRAHAM & STUBBS LLP

AB

This document reflects the firm's additional terms of engagement for the 2023 calendar year. These terms are an integral part of our agreement with you, except to the extent that the engagement letter(s) with respect to your open matter(s) specifically provide otherwise. Please review these additional terms and contact us promptly if you have any questions. You should keep this attachment with your current engagement letter(s).

Client

Duty to Cooperate With DGS. To help us provide legal services, you agree to cooperate fully with us, provide to us the facts accurately and completely, tender to us all relevant documents and information, respond promptly to our requests, and inform us of all information and developments relating to a matter. We necessarily rely on the accuracy and completeness of the information that you provide us, and we may rely on that information without independently verifying it.

No Third-Party Beneficiaries. Any advice or services provided by DGS is for your benefit alone, is given solely for the purpose of the engagement in respect of which it is sought and is not to be used by or relied upon for other purposes or by third parties. The firm's duty of care is to you alone and does not extend to third parties (including your affiliates) unless DGS has accepted such responsibility in writing.

Change of Control or Other Reorganization. If you acquire, are acquired by, merge, or affiliate with another company, you will provide us with sufficient notice to permit us to research and evaluate whether such acquisition, merger, or affiliation creates a conflict of interest with any of our current or prospective clients.

Scope of Engagement

Excluded Services. We do not provide investment, accounting, financial, engineering, valuation, or other technical services or advice, nor will we be judging, resolving, or opining as to questions of fact. Similarly, we do not make business decisions for you, and we do not investigate the character, credit, or source of funds of persons with whom you may be dealing. We do not provide or maintain any record system with respect to any applicable dates in agreements, licenses, or registrations to which you may be or may become a party, including, for example, dates as applicable to rights, obligations, or agreements in relation to expiries, renewal, registrations or re-registrations, exercises of options, rights of first refusal or any similar matters. Similarly, we will not undertake to file any continuation or other extension of any lien, financing statement or other filing of record prepared in connection with your matter(s) unless we specifically undertake in writing to do so.

Insurance Coverage. You should consider whether you have insurance coverage for any of the claims or liabilities arising out of the subject of our engagement and/or for related fees and expenses incurred. Unless explicitly stated otherwise in a written engagement letter, you have not retained us to provide advice about or to represent you concerning any such insurance coverage or to provide notice of claims. Accordingly, we will not provide advice or representation to you with respect to the issue of claims for insurance coverage that you might be entitled to assert for liability or losses arising out of the subject of our engagement, whether arising at the outset or during the course of the engagement. You should be aware that strategic decisions with respect to the subject of our engagement may affect insurance and coverage, and that coverage concerns may impact strategy, particularly in adversarial proceedings. You should consult with other counsel concerning such matters, including any possible or actual claims or disputes against or with any insurer or other parties who may owe you indemnification or a defense.

Other Advisors. When we are asked to recommend the services of another advisor or service provider, we will do so in good faith, but without liability and without warranting the ability or standing of that person or firm. DGS will not be responsible for monitoring or reviewing their work or for the quality of that work. In some cases, we may recommend as an advisor or service provider a person or firm that has retained or may in the future retain DGS as counsel in other matters.

No Guarantee of Outcome. We will try to achieve a result in a matter that is satisfactory to you. But we do not and cannot guarantee the outcome of any matter and our fees are not contingent upon the outcome or completion of a matter unless we have specifically agreed otherwise in writing. Either at the commencement or during the course of our representation, we may express our opinions, views or beliefs concerning claims or courses of action and potential results. Any such statement made by any representative of DGS is intended to be an expression of opinions, views and beliefs only, based on information available to us at the time, and should not be construed by you as a guarantee of any type. You also agree that we will not provide any contractual indemnity to you, your affiliates, or any other person or entity in connection with a matter.

Marijuana Businesses. The cultivation, production, distribution, sale, and purchase of marijuana products (“Marijuana Channel Activities”) are currently prohibited by U.S. federal criminal law even if the activities are operated in accordance with Colorado or other state laws. These federal prohibitions create limitations about our ability to represent clients that are directly engaged in Marijuana Channel Activities. These laws may also create limitations about our ability to represent clients that provide goods, services, technology, equipment, or financing to parties that are directly engaged in Marijuana Channel Activities. If you are involved in Marijuana Channel Activities or provide services or goods to parties involved in Marijuana Channel Activities, please raise this issue with the lead attorney staffing your matter(s) now so that we may assess how best to proceed.

Preserving Documents and Electronically Stored Information in Anticipation of Litigation

Federal and state law require clients and their attorneys to take timely affirmative steps to preserve documents and electronically stored information (“ESI”) that may be potentially relevant to litigation. Accordingly, if you have retained DGS in relation to a matter that involves litigation, or where litigation is reasonably anticipated, both you and DGS may be under an obligation to ensure that necessary steps are taken to implement a litigation hold and prevent destruction of potentially relevant documents and ESI. You agree that you will preserve all such information pending our specific directives and cooperate with DGS in subsequently following such directives. Among other things, DGS may need to meet for these purposes with personnel such as your General Counsel, IT Manager, and/or the primary custodian(s) of documents and ESI. DGS may also need to obtain information about your IT department, computer use and records retention policies, inventories of hardware and software, backup information, disaster recovery systems, security, internet use, and indices of directories and files.

Fees and Other Charges

Work Assignments. The lawyer you primarily deal with may assign parts of your work to other lawyers or other personnel in the office under his or her supervision and may use other firm lawyers where specialized help is needed. In addition, we may ask our special tax counsel and/or special data privacy counsel, lawyers from Nemirow Law LLP and Foundry Legal, LLC, respectively, to work on a matter in collaboration with DGS lawyers. The supervising lawyer will continue to be responsible to you for the entire assignment, however, and will be available to discuss the use of other personnel with you.

Basis of Fees. Unless otherwise stated in an engagement letter, our fees will be based primarily on the amount of time spent by lawyers and paralegals, and in some instances by law and document clerks, subject to certain adjustments. Each lawyer and paraprofessional working on a matter has an hourly billing rate, and the rate

times the number of hours spent on a project is the initial basis for determining our fee. However, we may, in consultation with you, adjust the charge based on other factors such as the novelty or complexity of the issues and problems encountered, the extent of the responsibility involved, the results achieved, the efficiency of our work, the customary fees for similar legal services, and other factors that will enable us to arrive at a fair fee. If we do not receive comment about an invoice within thirty (30) days of the statement date, we will assume that you have seen the invoice and find it acceptable.

Hourly Rates. Our 2023 standard hourly rates for legal services by lawyers range from \$390 to \$1,075 per hour, depending primarily on each lawyer's experience and expertise. 2023 hourly rates for our special tax counsel Larry Nemirow and Will Nemirow of Nemirow Law LLP are \$950 and \$450, respectively. Larkin Reynolds of Foundry Legal, LLC will be billed at \$600 per hour. Our hourly billing rates are usually reviewed and adjusted once a year and will typically be reflected in February invoices for time billed in January in any calendar year.

Estimates. It is often impractical to determine in advance the amount of effort that will be needed to complete all the necessary work on a matter or the total amount of fees, charges and costs that may be incurred. Obviously, if any estimates or budgets are provided, they may need to be adjusted upward or downward in response to changing circumstances. Unless otherwise expressly agreed in writing, our estimates and budgets are not intended to be binding, are subject to unforeseen circumstances, and by their nature are inexact and do not limit or "cap" our fees and other charges or costs.

Disbursements on Your Account. You will also be responsible for payment of all out-of-pocket costs and disbursements advanced or incurred by DGS in the course of an engagement. These disbursements and charges include items incurred and paid for by us on your behalf such as special postage, delivery charges, travel, photocopying, client-directed billing services, docketing systems, and use of other third-party providers such as printers or experts, if needed. In litigated matters, we include payments we must make for process servers, court reporters, witness fees, and so on. We also make separate charges for the use of systems to digitally process and store litigation data during the pendency of a matter.

Litigation Support Services

Should you decide to use our in-house litigation support capabilities, it is important to understand that we are not forensic document collectors engaged to acquire your electronically stored information or to certify its proper preservation for legal purposes. You will need to retain the separate services of forensic digital data collectors to perform this function. In addition, our litigation support technology is not a document storage system. Clients are advised to maintain a pristine copy of the electronically stored information delivered to us for processing. As your case nears completion, we may discuss with you whether and to what extent the digital materials delivered to us should be purged from our system and/or returned to you. In any event, after your case is concluded you should assume that these digital materials will be destroyed after one year.

Email and Email Attachments

Any content (whether or not containing confidential information) sent to you by email, including documents shared as email attachments, will not be encrypted unless you specifically request us, in writing, to encrypt outgoing emails and we are able to agree with you and implement mutually acceptable encryption standards and protocols.

We maintain firmwide security protocols based on international standards and we make reasonable attempts to exclude any virus or other defects from email attachments. However, it is your responsibility to put measures in place to protect your computer or IT systems against any such virus or defect, and we do not accept any liability for any loss or damage that may rise from receipt or use of electronic communications from us.

Use of Cloud and Other Third-Party Services for the Storage and Processing of Data

We utilize a cloud-based third-party service provider to facilitate the provision of secure data storage and transfer services to you. We review all third-party service providers to confirm their adherence to (i) industry standard cybersecurity frameworks to protect confidentiality, integrity, and availability of data and (ii) applicable data protection laws. If you require us to use a different cloud storage provider (e.g., Dropbox, Box.com, Google Drive, etc.) for the storage, processing, sharing or exchange of any content generated or used in the course of a specific engagement we assume no responsibility for the security or integrity of data or the provider's security standards.

Billing Arrangements and Payment Terms

Retainers. We may ask you to deposit an amount with us as security for the payment of our fees, which we will hold in our trust account on your behalf. We will submit our statements to you monthly and if they are not paid within thirty (30) days, we may also withdraw from the funds held in our trust account on your behalf the amounts necessary to pay any such statements. If the retainer is insufficient to pay the statements for which it is to be used, you will be billed for the deficiency that we ask to be paid immediately. Whenever the retainer is reduced to a balance of less than the original amount deposited, we will advise you and ask you to replenish the retainer to the original amount or such other amount we determine is required by the circumstances within seven (7) days. Notwithstanding the existence of any retainer, DGS always reserves the right to withdraw, at any time and in its sole discretion, from a client representation due to a client's financial circumstances. Any unused portion of the retainer will be returned to you, without interest, upon termination of our representation.

Billing Frequency. Unless otherwise agreed in an engagement letter, DGS will send you an invoice for each month in which work is performed or expenses are incurred on your behalf. Depending on the nature and magnitude of the services, we may bill more frequently. Each invoice will state the fees charged for attorneys and any other timekeepers, itemize expenses related to the matter, and show any charges for any third parties who bill the firm for their services.

Payment Terms. Our billing rates are based on the assumption of prompt payment. Statements unpaid within thirty (30) days will be subject to a late charge of 1.5% per month (18% per year) on the unpaid balance commencing from the date of the original statement and continuing until paid. Payment should be made in U.S. dollars, by checks payable to "Davis Graham & Stubbs LLP" or pursuant to wire or automated clearinghouse instructions provided to you. We do not accept credit card payments with respect to our invoices. If any of our statements are not promptly paid, we may, consistent with our ethical obligations and judicial requirements, cease performing services for you until arrangements satisfactory to us have been made for payment of arrearages and prospective future fees. DGS always reserves the right to withdraw, at any time and in its sole discretion, from a client representation due to a client's unwillingness or apparent inability to pay amounts due or anticipated with respect to an engagement.

Third-Party Charges. Unless special arrangements are made, you are responsible for paying the charges of outside contractors and service providers used on a matter and we may instruct them to bill you directly for their services when appropriate. Unless otherwise agreed, those outside contractors and service providers are deemed to be directly engaged by you even if their invoices are addressed to us. If they send invoices to us, we may re-direct them to you for payment. In our discretion, we may pay such invoices on your behalf and include those sums in our invoices to you.

Taxes on Invoiced Amounts. If you are required by law to deduct or withhold any taxes from payments due to DGS, or if DGS or its lawyers are required to pay any taxes directly to any taxing authority with respect to our charges, you agree to pay us the additional amounts necessary to compensate DGS for the withholding or

additional cost so that, after the withholding or payment of the taxes, DGS receives the full amount due under its invoices.

Ultimate Responsibility for Payment. By engaging us, you acknowledge that you are responsible for payment of our fees, expenses, and other charges. In appropriate matters, as an accommodation to you, we may agree to send our invoices to third-party payors (e.g., an insurer, indemnitor, equity owner, or borrower). But you agree that you will remain fully responsible for timely payment of our invoices if for any reason the third-party payor does not timely pay them in full.

Delinquent Accounts. Occasionally, an account becomes delinquent. Should this occur, the firm has collection procedures that it may undertake to ensure that the account is paid promptly. If we initiate proceedings to collect a delinquent account, you agree to pay our costs of collection, including reasonable attorneys' fees. In fairness to most of the firm's clients who pay their bills each month, these collection procedures and our late payment charge have been established so that the minority of clients whose accounts become delinquent will bear the firm's cost of such delinquent accounts.

Document Retention Policy

It is the firm's policy to retain relevant documents and electronically stored information in our possession ("Engagement Files") for every matter until the completion of the engagement. Shortly after the conclusion of an engagement, we may send you a written offer to return some or all of these Engagement Files to you. We may delay or limit our offer to return Engagement Files if we believe that there are unusual circumstances requiring us to retain some or all of them after the completion of the engagement. However, if we do offer to return Engagement Files to you and you fail to accept the return of the Engagement Files within three (3) months of our offer, you agree that the firm may destroy all unclaimed Engagement Files. In any event, if we do not send you a written offer to return your Engagement Files to you after the completion of an engagement, it is our policy to destroy all files (including all materials in those files), ten (10) years after we have last billed the client for services on the engagement. While this retention period may be adjusted if current legal or ethical restrictions on destruction of client files are modified, unless you are informed otherwise by us, you should assume that your Engagement Files will be destroyed after this ten (10) year period. After ten (10) years, our file destruction process is automatic, and you will not receive any further notice prior to the final disposition of your Engagement Files. Accordingly, if you wish to maintain a record of a matter beyond this ten (10) year retention period, you should make a written request for the Engagement Files that you wish to retain upon the completion of the engagement.

Termination or Conclusion of Engagement

Termination Generally. You may terminate an engagement at any time and for any reason by informing us in writing. Similarly, we may terminate or withdraw from our representation of you at any time for any reason (including non-payment of fees), provided we comply with the applicable rules of professional conduct. If we decide to withdraw for any reason, you agree to take all steps necessary to release us from any further obligation to represent you, including signing any documents necessary to complete our withdrawal. In the event of a termination or our withdrawal, you will pay us any outstanding fees and other charges.

Automatic Termination. Unless sooner terminated by either of us, an engagement and the attorney-client relationship created by a matter will end at the earliest of your or our formal termination of the representation, or upon our completion of the specific services that you have retained us to perform on a matter. The completion of our work may be dispositively evidenced by a final bill or by a 24-month period of billing inactivity. If you later engage us for any related or additional matter, our attorney-client relationship will be revived once that engagement and its scope must be confirmed in a separate engagement letter or in a written supplement

to an engagement letter. The fact that we may inform you from time to time of developments in the law that may be of interest to you, by newsletter or otherwise, should not be understood as a revival of an attorney-client relationship.

Future Changes in Law or Other Developments. After the end of a matter, circumstances might evolve and changes might occur in the applicable laws or regulations that could affect your future rights and obligations. Unless you engage us after completion of a matter to provide such advice, we have no continuing obligation to advise you about future legal developments or your future rights and obligations based on future changes in law or other developments.

Post-Termination Tasks. After the conclusion of a matter, you might ask us, or we might be compelled, to undertake certain post-engagement tasks relating to the matter but not involving the provision of legal representation, such as responding and objecting to subpoenas, searching for and producing documents, preparing for testimony, performing transition work, and other similar activities. In such case, we will promptly consult with you about whether you wish, in the first instance, to supply the information requested or to assert any attorney-client privilege or any other privileges or reason for withholding information. You agree to compensate us for the fees and expenses we incur in these post-termination tasks, including payment for the time spent by our attorneys and other timekeepers calculated at our then-current hourly rates. However, we will not be obligated to submit to interviews or to provide testimony, and any post-engagement work will not constitute the performance of legal services for you or create or revive an attorney-client relationship between us.

Arbitration of Disputes

If you disagree with any aspect of our legal services, including our fees, we encourage you to discuss your concerns directly with the DGS attorney(s) you work with. Our experience has been that such disagreements can be resolved to the satisfaction of both sides with little inconvenience or formality. However if such efforts are not successful, both DGS and you agree that any dispute relating to our charges or the legal services performed in any engagement will be submitted to binding arbitration in Denver, Colorado, pursuant to the Colorado Uniform Arbitration Act and the rules of the American Arbitration Association. The arbitration proceeding will be conducted in Denver, Colorado by the Judicial Arbitrator Group, Inc., and selection of an arbitrator and the conduct of the arbitration will be handled pursuant to that entity's then-existing procedures. Any decision in such arbitration proceeding will be final and binding on you and DGS, except as otherwise provided by law. Judgment upon the award entered by the arbitrator may be entered in any court having appropriate jurisdiction. Notwithstanding the provisions in this paragraph, either party may seek temporary or emergent injunctive relief in aid of arbitration and to prevent irreparable injury in any court of competent jurisdiction.

PLEASE UNDERSTAND THAT UNDER COLORADO LAW, PUNITIVE DAMAGES ARE NOT RECOVERABLE BY ANY PARTY SUBJECT TO ARBITRATION, NOR ARE JURY TRIALS AVAILABLE IN ARBITRATION. YOU UNDERSTAND THAT, BY AGREEING TO ARBITRATION, YOU HEREBY VOLUNTARILY AND IRREVOCABLY WAIVE YOUR RIGHT TO TRIAL BY JURY IN ANY DISPUTE ARISING FROM OR RELATED TO ANY SERVICES PROVIDED UNDER ANY ENGAGEMENT.

Governing Law

Our agreement will be interpreted and enforced under Colorado law without giving effect to Colorado's choice of law rules. Any unenforceable provision in our engagement letter or these Additional Engagement Terms will be severed from our agreement, and the remainder of our agreement will be enforced to the fullest extent possible.

AS NEEDED

CONSULTING SERVICES AGREEMENT

THIS AS NEEDED CONSULTING SERVICES AGREEMENT (“Agreement”) is made and entered into this _____ day of October, 2023, to be effective as of January 1, 2024 (“Effective Date”), by and between the **CHERRY CREEK BASIN WATER QUALITY AUTHORITY**, a quasi-municipal corporation and political subdivision of the State of Colorado (“Authority”), whose address is Post Office Box 3166, Centennial, Colorado 80161, and **ERO RESOURCES CORPORATION**, a Colorado corporation (“Consultant”), whose address is 1842 North Clarkson Street, Denver, Colorado 80218, telephone number (303) 830-1188. Consultant and Authority may hereinafter singularly be referred to as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, the Authority was established for the purpose of preserving, protecting, and enhancing the water quality in the Cherry Creek Reservoir (“Reservoir”) and the Cherry Creek Watershed (“Watershed”); and

WHEREAS, Consultant has staff that is knowledgeable and possesses the expertise and analytical skills with respect to certain environmental, ecological, and permitting issues that the Authority may need to address from time to time; and

WHEREAS, for those reasons, the Authority desires to confer with Consultant on an as needed basis as determined by the Authority acting by and through its Executive Committee and/or Technical Manager; and

WHEREAS, Consultant is willing to consult with Authority on an as needed basis, upon the terms and conditions as set forth below.

NOW, THEREFORE, in consideration of the promises and other good and valuable consideration as set forth herein, Authority and Consultant agree as follows:

1. **Scope of Services.** Without having a specific, or predetermined scope of work, Consultant agrees to make available Consultant’s staff and resources and to consult with Authority on any matter within Consultant’s area of expertise, when requested to do so as set forth in a written Work Order to be issued by the Authority; provided Consultant and Authority agree in advance on a mutually acceptable schedule for Consultant’s performance of the requested services (“Services”), if such a schedule is necessary as determined by either Party. A Work Order when signed and issued by the Authority in substantially the form attached hereto as **Exhibit A**, shall be deemed accepted by Consultant and incorporated into this Agreement if signed by Consultant. Consultant shall provide Services in accordance with the terms and subject to the conditions set forth in the Work Order and this Agreement: i) using personnel possessing the required skill, experience, and

qualifications for the Services; ii) in a timely, workmanlike and professional manner; iii) in accordance with the standards of care prevailing in Consultant's field; and iv) to the reasonable satisfaction of Authority.

2. **Authorization to Provide Services.** Upon the issuance of a Work Order to Consultant, Consultant shall be authorized to perform the Services as set forth in the Work Order, or pursuant to a verbal request; provided, however, any verbal request to perform Services having an estimated cost to the Authority of more than \$1,000 will be confirmed in writing by a written Work Order to be signed by both Parties.

3. **Compensation.** For the Services performed for Authority during the Term of this Agreement, which shall expire on December 31, 2024, Consultant shall be compensated at Consultant's hourly rates as identified in Consultant's 2024 hourly rate schedule, attached hereto as **Exhibit B**, or on a per task basis, if agreed to in writing. Notwithstanding any other provision contained in this Agreement to the contrary, total compensation for Services provided by Consultant to Authority during calendar year 2024 shall not exceed \$6,500 without the prior express written consent of a representative of the Authority's Executive Committee and/or Technical Manager.

4. **Ownership of Work Product.** It is agreed that any and all documents, recommendation or information provided to Authority by Consultant in connection with the Services that Consultant performs for Authority, shall be the property of the Authority.

5. **Compliance with Laws.** In performing the Services, Consultant shall comply with all applicable laws, rules and regulations, applicable to the Services, including, but not limited to, all federal, state and local laws.

6. **Insurance.** Consultant shall not commence work on any Services for Authority until the following minimum insurance coverages have been obtained:

a) **Workers' Compensation Insurance.** Consultant shall carry workers' compensation insurance to cover liability under the laws of the State of Colorado in connection with the Services performed pursuant to this Agreement.

b) **Commercial General Liability Insurance.** Consultant shall carry commercial general liability insurance, which shall include blanket contractual liability coverage. Such insurance shall be in amounts specified in the Colorado Governmental Immunity Act, Section 24-10-101, et seq., C.R.S., as the same may be amended from time-to-time, and which limits currently are \$424,000 per person and \$1,195,000 per occurrence for bodily injury and property damage.

c) **Automobile Liability Insurance.** Consultant shall carry automobile liability insurance to include owned, non-owned and hired vehicles used in the performance of the Services. Such insurance shall be in an amount specified in the Colorado Governmental Immunity Act, Section 24-10-101, et seq., C.R.S., as the same may be

amended from time-to-time, and which limits currently are \$424,000 per person and \$1,195,000 per occurrence for bodily injury and property damage.

d) Professional Liability Insurance. Consultant, and any subconsultant, if any, shall carry professional liability insurance in the minimum amount of \$1,000,000 per claim and having an aggregate limit of \$1,000,000, unless an alternate amount is agreed upon, in writing, by the Authority.

The required commercial general liability and automobile policies shall: (i) name the Authority as an additional insured for coverage only, with no premium payment obligation; (ii) provide that the coverage for the Authority shall not be impaired by the Consultant's failure to comply with any of the terms or conditions of the policy. Consultant shall provide certificates of insurance demonstrating the required coverages have been obtained prior to performing any Services for the Authority under this Agreement.

7. Independent Contractor. In the performance of Services, Consultant shall be for all purposes, an independent contractor, and not an employee or agent of Authority. Consultant and its employees and subconsultants shall in no way represent themselves to third parties as agents or employees of the Authority. **As an independent contractor, Consultant is not entitled to workers' compensation benefits and Consultant is obligated to pay federal and state income tax on any monies earned pursuant to this Agreement.**

8. Liability. Consultant agrees to provide a defense, pay any damages and costs for any liability or claim of whatsoever kind or nature arising in any way out of this Agreement, to the extent caused by any negligent or wrongful act or omission of Consultant, subconsultants, or Consultant's or subconsultants officers, agents or employees. This paragraph shall survive termination of this Agreement.

9. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns.

10. Severability. In the event any one of more of the provisions of this Agreement shall for any reason be held to be invalid or unenforceable, the remaining provisions of this Agreement shall be unimpaired, and shall remain in full force and effect and shall be binding upon the Parties hereto.

11. Records and Audits. Consultant shall at all times maintain a system of accounting records in accordance with its normal billing procedures, together with supporting documentation for all work, purchases, Services and billings under this Agreement. Consultant shall make available for audit and reproduction by Authority all records, in whatever form, related to the Services. Consultant shall provide such availability during the Term of this Agreement and for two (2) years after final payment.

12. **Counterpart Signatures.** This Agreement can be executed in counterparts, each of which taken together shall constitute one original document.

13. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado.

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate original as of the dates set forth below. This Agreement must have the signature of an authorized representative of Consultant on both original copies.

AUTHORITY:

CHERRY CREEK BASIN WATER QUALITY AUTHORITY, a quasi-municipal corporation and political subdivision of the State of Colorado

By: _____

Josh Rivero, Chair

Date: _____

Attest:

John McCarty, Secretary

Approved as to Form:

Timothy J. Flynn, General Counsel for
Cherry Creek Basin Water Quality Authority

CONSULTANT:

ERO RESOURCES CORPORATION, a Colorado corporation

By: _____

Name/Title: _____

EXHIBIT A

<p>ORDERED BY:</p> <p>CHERRY CREEK BASIN WATER QUALITY AUTHORITY ("AUTHORITY")</p> <p>Bill Ruzzo, Representative of Executive Committee Email: bill.ruzzo@comcast.net Voice: 303-589-5358</p> <p>Jane Clary, Technical Manager Email: clary@wrightwater.com Voice: (303) 480-1700</p>		<h1 style="margin: 0;">WORK ORDER</h1> <p>Work Order No.: _____</p> <p>Date Issued: _____, 2024</p>
CONSULTANT		Notes:
<p>ERO RESOURCES CORPORATION ("CONSULTANT")</p> <p>Email: _____</p> <p>Voice: _____</p>		

This Work Order authorizes Consultant to supply materials, labor, and services ("Services") to the Authority as hereinafter described or as set forth as an Exhibit to this Work Order, pursuant to that certain As Needed Consulting Services Agreement previously entered into between the Parties ("Agreement"). Consultant agrees to perform the Services in accordance with this Work Order and the Agreement.

Item	Description	Unit Cost	Amount	Quantity

Authorized Signatures:

CHERRY CREEK BASIN WATER QUALITY AUTHORITY

By: _____
 Bill Ruzzo, Executive Committee Member

ERO RESOURCES CORPORATION

By: _____
 Name: _____
 Title: _____

2024 Schedule of Fees



Position	Hourly Rate
Senior Principal	\$ 228
Project Principal	\$ 209
Senior Project Manager	\$ 204
Senior Project Biologist	\$ 191
Biologist I	\$ 161
Biologist II	\$ 132
Staff Biologist	\$ 113
Biological Technician	\$ 88
Natural Resource Technician	\$ 68
Senior Environmental Planner	\$ 192
Project Environmental Planner	\$ 168
Staff Environmental Planner I	\$ 149
Staff Environmental Planner II	\$ 130
Staff Environmental Planner III	\$ 112
Senior Geoscientist	\$ 193
Geoscientist I	\$ 161
Geoscientist II	\$ 137
Staff Geoscientist	\$ 114
Geoscience Technician	\$ 83
Graphics Specialist	\$ 136
GIS Specialist I	\$ 136
GIS Specialist II	\$ 114
GIS Technician	\$ 82
Cultural Resource Principal Investigator	\$ 191
Senior Cultural Resource Specialist	\$ 149
Project Cultural Resource Specialist I	\$ 118
Project Cultural Resource Specialist II	\$ 108
Project Cultural Resource Specialist III	\$ 100
Staff Cultural Resource Specialist I	\$ 96
Staff Cultural Resource Specialist II	\$ 83
Staff Cultural Resource Specialist III	\$ 75
Cultural Resource Technician	\$ 65
Architectural Historian I	\$ 130
Architectural Historian II	\$ 113
Architectural Historian III	\$ 94
Word Processing/Editor	\$ 114
Administrative Staff	\$ 95
Clerical Staff	\$ 81

* Expert Testimony will be billed at 1.5 times standard billing rate/hour

Additional Expenses

Vehicle mileage: IRS rates

Off-Road Charge: \$30/day

Field Equipment: \$10/day

Black and white copies:
8.5" x 11" at \$0.15 each

Color copies:
8.5" x 11" at \$0.30 each
Large-format plots: \$2 square foot

GPS Rental: \$125/day

Cultural Resource Data Collector:
\$50/day

Other direct expenses: Cost + 8%

Subcontractors: Cost + 8%

September 29, 2023

To the Board of Directors and Management
Cherry Creek Basin Water Quality Authority
Arapahoe and Douglas Counties, Colorado

We are pleased to propose audit services and confirm our understanding of the services we are to provide Cherry Creek Basin Water Quality Authority (the Authority) for the year ended December 31, 2023.

Audit Scope and Objectives

We will audit the financial statements of the governmental activities, the business-type activities, and each major fund, and the disclosures, which collectively comprise the basic financial statements of the Authority as of and for the year ended December 31, 2023. Accounting standards generally accepted in the United States of America (GAAP) provide for certain required supplementary information (RSI), such as management's discussion and analysis (MD&A), to supplement the Authority's basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the Authority's RSI in accordance with generally accepted auditing standards (GAAS). These limited procedures will consist of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We will not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance. The Statements of Revenues, Expenditures, and Changes in Fund Balance – Budget and Actual – General Fund and Pollution Abatement Fund, will be subjected to the auditing procedures applied in our audit of the financial statements.

We have also been engaged to report on supplementary information other than RSI that accompanies the Authority's financial statements. We will subject the following supplementary information, as applicable, to the auditing procedures applied in our audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America (GAAS), and we will provide an opinion on it in relation to the financial statements as a whole, in a report combined with our auditor's report on the financial statements:

- 1) Schedule of Revenue, Expenditures, and Changes in Funds Available – Budget and Actual (Budgetary Basis) – Water Activity Fund
- 2) Reconciliation of Budgetary Basis (Actual) to Statement of Revenues, Expenses, and Changes in Net Position – Water Activity Fund
- 3) Schedule of Assessed Valuation, Mill Levy, and Property Taxes Collected

The objectives of our audit are to obtain reasonable assurance as to whether the financial statements as a whole are free from material misstatement, whether due to fraud or error; issue an auditor's report that includes our opinion about whether the Authority's financial statements are fairly presented, in all material respects in conformity with GAAP, and report on the fairness of the supplementary information referred to in the second paragraph when considered in relation to the financial statements as a whole. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. Misstatements, including omissions, can arise from fraud or error and are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgement of a reasonable user made based on the financial statements.

Fiscal Focus Partners, LLC

Auditor's Responsibilities for the Audit of the Financial Statements

We will conduct our audit in accordance with GAAS and will include tests of your accounting records and other procedures we consider necessary to enable us to express such opinions. As part of an audit in accordance with GAAS, we exercise professional judgement and maintain professional skepticism throughout the audit.

We will evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management. We will also evaluate the overall presentation of the financial statements, including the disclosures, and determine whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation. We will plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the Authority or to acts by management or employees acting on behalf of the Authority.

Because of the inherent limitations of an audit, combined with the inherent limitations of internal control, and because we will not perform a detailed examination of all transactions, there is an unavoidable risk that some material misstatements may not be detected by us, even though the audit is properly planned and performed in accordance with U.S. generally accepted auditing standards. In addition, an audit is not designed to detect immaterial misstatements, or violations of laws or governmental regulations that do not have a direct and material effect on the financial statements. However, we will inform the appropriate level of management of any material errors, fraudulent financial reporting, or misappropriation of assets that comes to our attention. We will also inform the appropriate level of management of any violations of laws or governmental regulations that come to our attention, unless clearly inconsequential. Our responsibility as auditors is limited to the period covered by our audit and does not extend to any later periods for which we are not engaged as auditors.

We will also conclude, based on the audit evidence obtained, whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Authority's ability to continue as a going concern for a reasonable period of time.

Our procedures will include tests of documentary evidence supporting the transactions recorded in the accounts, and tests of the physical existence of inventories, and direct confirmation of receivables and certain assets and liabilities by correspondence with selected individuals, funding sources, creditors, and financial institutions. We will also request written representations from your attorneys as part of the engagement, and they may bill you for responding to this inquiry.

We may from time to time and depending on the circumstances, use third-party service providers in serving your account. We may share confidential information about you with these service providers but remain committed to maintaining the confidentiality and security of your information. Accordingly, we maintain internal policies, procedures, and safeguards to protect the confidentiality of your personal information. In addition, we will secure confidentiality agreements with all service providers to maintain the confidentiality of your information and we will take reasonable precautions to determine that they have appropriate procedures in place to prevent the unauthorized release of your confidential information to others. In the event that we are unable to secure an appropriate confidentiality agreement, you will be asked to provide your consent prior to the sharing of your confidential information with the third-party service provider. Furthermore, we will remain responsible for the work provided by any such third-party service providers.

Audit Procedures—Internal Control

We will obtain an understanding of the Authority and its environment, including internal control relevant to the audit, sufficient to identify and assess the risks of material misstatement of the financial statements, whether due to error or fraud, and to design and perform audit procedures responsive to those risks and obtain evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentation, or the override of internal control. An audit is not designed to provide assurance on internal control or to identify deficiencies in internal control. Accordingly, we will express no such opinion. However, during the audit, we will communicate to management and those charged with governance internal control related matters that are required to be communicated under AICPA professional standards.

Audit Procedures—Compliance

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of the Authority's compliance with the provisions of applicable laws, regulations, contracts, and agreements. However, the objective of our audit will not be to provide an opinion on overall compliance and we will not express such an opinion.

Other Services

We, in our sole professional judgment, reserve the right to refuse to perform any procedure or take any action that could be construed as assuming management responsibilities.

You agree to assume all management responsibilities for any nonattest services we provide; oversee the services by designating an individual, preferably from senior management, with suitable skill, knowledge, or experience; evaluate the adequacy and results of the services; and accept responsibility for them.

Responsibilities of Management for the Financial Statements

Our audit will be conducted on the basis that you acknowledge and understand your responsibility for designing, implementing, and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatements, whether due to fraud or error, including monitoring ongoing activities; for the selection and application of accounting principles; and for the preparation and fair presentation of the financial statements in conformity with accounting principles generally accepted in the United States of America.

Management is responsible for making drafts of the financial statements, all financial records and related information available to us and for the accuracy and completeness of that information (including information from outside of the general and subsidiary ledgers). You are also responsible for providing us with (1) access to all information of which you are aware that is relevant to the preparation and fair presentation of the financial statements, such as records, documentation, identification of all related parties and all related-party relationships and transactions, and other matters; (2) additional information that we may request for the purpose of the audit, and (3) unrestricted access to persons within the Authority from whom we determine it necessary to obtain audit evidence. At the conclusion of our audit, we will require certain written representations from you about the financial statements and related matters.

Your responsibilities include adjusting the financial statements to correct material misstatements and confirming to us in the management representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

You are responsible for the design and implementation of programs and controls to prevent and detect fraud, and for informing us about all known or suspected fraud affecting the Authority involving (1) management, (2) employees who have significant roles in internal control, and (3) others where the fraud could have a material effect on the financial statements. Your responsibilities include informing us of your knowledge of any allegations of fraud or suspected fraud affecting the Authority received in communications from employees, former employees, grantors, regulators, or others. In addition, you are responsible for identifying and ensuring that the Authority complies with applicable laws and regulations.

You are responsible for the preparation of the supplementary information in conformity with U.S. generally accepted accounting principles. You agree to include our report on the supplementary information in any document that contains and indicates that we have reported on the supplementary information. You also agree to include the audited financial statements with any presentation of the supplementary information that includes our report thereon. Your responsibilities include acknowledging to us in the representation letter that (1) you are responsible for presentation of the supplementary information in accordance with GAAP; (2) you believe the supplementary information, including its form and content, is fairly presented in accordance with GAAP; (3) the methods of measurement or presentation have not changed from those used in the prior period (or, if they have changed, the reasons for such changes); and (4) you have disclosed to us any significant assumptions or interpretations underlying the measurement or presentation of the supplementary information.

Engagement Administration, Fees, and Other

We understand that your employees or consultants will prepare all cash, accounts receivable, or other confirmations we request and will locate any documents selected by us for testing.

The audit documentation for this engagement is the property of Fiscal Focus Partners, LLC and constitutes confidential information. However, subject to applicable laws and regulations, audit documentation and appropriate individuals will be made available upon request and in a timely manner to an applicable regulator or its designee. We will notify you of any such request. If requested, access to such audit documentation will be provided under the supervision of Fiscal Focus Partners, LLC personnel. Furthermore, upon request, we may provide copies of selected audit documentation to an applicable regulator or its designee. The applicable regulator or its designee may intend or decide to distribute the copies or information contained therein to others, including other governmental agencies.

We expect to begin our audit on a date mutually agreed to by your accountants and our firm, and to issue our reports no later than July 31, 2024, or September 30, 2024 if the Authority is eligible for, and management requests, an

extension of time from state auditor. If the originally scheduled audit commencement date is not met due to delays in availability of required information and rescheduling is necessary, we will advise you of any change in anticipated report issuance dates. Eric Barnes will be the engagement partner and will be responsible for supervising the engagement and signing the report or authorizing another individual to sign it. The designated partner may change depending on scheduling and work demands. You will be advised of any change in the designated partner. Our audit engagement commences when all information necessary to conduct the audit is available and provided to us, and ends on delivery of our audit report. Any follow-up services that might be required will be a separate, new engagement. The terms and conditions of that new engagement will be governed by a new, specific engagement letter for that service. This engagement agreement may be cancelled by you or by us upon written notice provided at least 45 days prior to engagement commencement.

Our fee for these services will be \$8,200 plus out-of-pocket costs (such as postage, mileage, etc.). Our invoice for these fees will be rendered upon completion of fieldwork and in-house review and is payable on presentation. In accordance with our firm policies, work may be suspended if your account becomes thirty days or more overdue and may not be resumed until your account is paid in full. If we elect to terminate our services for nonpayment, our engagement will be deemed to have been completed upon written notification of termination, even if we have not completed our report. You will be obligated to compensate us for all time expended and to reimburse us for all out-of-pocket costs through the date of termination. The above fee is based on anticipated cooperation from your personnel, contractors, and professionals, and the assumption that unexpected circumstances will not be encountered during the audit. If significant additional time is necessary, we will discuss it with you and arrive at a new fee estimate before we incur the additional costs.

Reporting

We will issue a written report upon completion of our audit of the Authority's financial statements. Our report will be address to the Board of Directors of the Authority. Circumstances may arise in which our report may differ from its expected form and content based on the results of our audit. Depending on the nature of these circumstances, it may be necessary for us to modify our opinions, add a separate section, or add an emphasis-of-matter or other-matter paragraph to our auditor's report, or if necessary, withdraw from this engagement. If our opinions are other than unmodified, we will discuss the reasons with you in advance. If, for any reason, we are unable to complete the audit or are unable to form or have not formed opinions, we may decline to express opinions or withdraw from this engagement.

We appreciate the opportunity to be of service to Cherry Creek Basin Water Quality Authority and believe this letter accurately summarizes the significant terms of our engagement. If you have any questions, please let us know. If you agree with the terms of our engagement as described in this letter, please sign the enclosed copy and return it to us.

Very truly yours,

Fiscal Focus Partners, LLC

Fiscal Focus Partners, LLC

RESPONSE:

This letter correctly sets forth the understanding of Cherry Creek Basin Water Quality Authority.

Authorized signature: _____ Title: _____

Date: _____

AGREEMENT
FOR
PROFESSIONAL INFORMATION TECHNOLOGY SERVICES

THIS AGREEMENT FOR TECHNICAL PROFESSIONAL INFORMATION TECHNOLOGY SERVICES (“Agreement”) is entered into as of the 19th day of October 2023, to be effective as of January 1, 2024, between the **CHERRY CREEK BASIN WATER QUALITY AUTHORITY**, a quasi-municipal corporation and political subdivision of the State of Colorado (“Authority”), whose address is P.O. Box 3166, Centennial, Colorado 80161, telephone number, 303-718-6636 and **PINPOINT SYSTEMS, INC.** (“PSI”), whose address is 4505 South Broadway, Englewood, Colorado 80113, telephone number, 303-761-5227. Consultant and Authority may hereinafter singularly be referred to as a “Party” and collectively as the “Parties.”

1. **Description of Services.** Effective January 1, 2024, PSI shall provide the following services (collectively, the “Services”): Computer network consulting including management, maintenance, upgrades, and replacement as needed for system access and growth of Authority operations. This shall apply to and include servers, network infrastructure (switches, routers, Internet access, firewalls, Cloud resources, etc.), personal computer workstations, Internet-aware devices, equipment diagnostic and minor repairs, software consulting and related project management. PSI may, in fulfilling its obligations under this Agreement, use independent contractors to expedite work and respond to Authority’s needs. Whenever said independent contractors are involved, PSI will provide appropriate supervision arranged on a case-by-case basis with Authority approval. Hardware repair needs will be reviewed on a case-by-case basis and generally shall be repaired by subcontractor(s) arranged by PSI on Authority’s behalf with direct payment by Authority to said subcontractor(s). Software development generally shall be handled in the same manner. Due to the degree of variables out of Authority or PSI’s control, no performance guarantees are herein given. However, PSI will respond Monday through Friday between the hours of 8:00 AM to 5:00 PM, Mountain Time excluding Authority and PSI holidays, making every effort to address critical issues within four (4) business hours and to work on system needs continually until resolved. PSI will provide service for identified mission critical applications on holidays and weekends. PSI will also perform software upgrades and preventative maintenance during off-peak hours. Authority agrees to make all resources available to assist PSI in maintaining systems and resolving system issues including thorough description of issues, remote access to servers and Cloud resources, system reboots and physical entry to any work location with after business hour access if requested by PSI. PSI will provide cost estimates when requested for each repair or service requested by Authority. PSI will provide staff training as requested by Authority management to maximize efficient use of all resources.

2. **Payment for Services.** Authority will pay PSI for the Services based on PSI's current rates. For calendar year 2024, PSI's rate shall be \$210.00 per hour. PSI reserves the right to charge more for holiday and weekend services, particularly if said Services are needed more than once a month. PSI shall send monthly invoices to Authority for the Services which are due within thirty (30) days of receipt. These invoices will include a log detailing the hours worked each day along with Services provided. Authority shall also pay for hardware and software purchases from PSI. Authority shall have the right to refuse to pay all or a portion of any invoice that is inconsistent with this Agreement. Authority may delay payment until it can verify the accuracy of an invoice, obtain releases or waivers with respect to Services covered in the invoice, or resolve a dispute with PSI regarding an invoice.

3. **Duration and Renewal.** Subject to the provisions of this paragraph and paragraphs 11 and 12 below, this Agreement is initially for one (1) year and shall be automatically extended on a year-to-year basis unless sixty (60) days prior to the expiration date of such Term either Party gives written notice to the other Party of non-renewal. Either Party may terminate this Agreement at any time by giving sixty (60) days written notice.

4. **Relationship of Parties and Limitation of Liability.** PSI agrees to carry \$1,000,000 Commercial General Liability Insurance. It is understood by the Parties that PSI is an independent contractor with respect to Authority, and not an employee of Authority. PSI shall not be liable for lost profits, lost savings or other direct, indirect, incidental, or consequential damages arising out of this Agreement or Services provided pursuant this Agreement even if advised of the possibility of such damages. Authority agrees that unless covered by PSI's insurance, in no event shall PSI be liable for more than the current fees for the last thirty (30) days charged under this Agreement.

In addition to Commercial General Liability Insurance shall carry Workers' Compensation Insurance to cover liabilities under the laws of the State of Colorado in connection with the Services performed pursuant to this Agreement.

PSI shall also carry Automobile Liability Insurance to include owned, non-owned and hired vehicles used in the performance of Services under this Agreement. Such insurance shall be in an amount satisfactory to Authority.

Prior to commencing any Services under this Agreement, PSI shall provide Authority a Certificate of Insurance evidencing the coverages required by this Agreement as well as the amounts of coverage for the respective types of coverage required. The required Commercial General Liability and Automobile policies shall name Authority as an additional insured for coverage only, with no premium payment obligation.

5. **Work Product Ownership.** Any copyrightable works, products, or other information (collectively, the "Work Product") developed in whole or in part by PSI in connection with the Services shall be the exclusive property of Authority. Upon request, PSI

shall sign documents necessary to confirm or perfect the exclusive ownership of Authority to the Work Product.

6. **Confidentiality.** PSI will not at any time or in any manner, either directly or indirectly, use for the personal benefit of PSI, or divulge, disclose, or communicate in any manner any information that is proprietary to Authority other than is required to supervise subcontractors strictly on a need-to-know basis. PSI will protect such information and treat it as strictly confidential. This provision shall continue to be effective after the termination of this Agreement.

7. **Injuries.** PSI acknowledges PSI's obligation to obtain appropriate insurance coverage for the benefit of PSI (and PSI's employees, if any). PSI waives any rights to recovery from Authority for any injuries that PSI (and/or PSI's employees) may sustain while performing Services under this Agreement unless said injuries are clearly a result of Authority's negligence.

8. **Entire Agreement.** This Agreement contains the entire agreement between the Parties and there are no other promises or conditions in any other agreement whether oral or written.

9. **Severability.** If any provision of this Agreement shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of this Agreement is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

10. **General.** Neither Party may transfer this Agreement without the prior written consent of the other Party. Any attempt to assign any rights, duties, or obligations of this Agreement without such consent shall render it null and void. This Agreement shall be governed by the laws of the State of Colorado.

11. **No Multiple Fiscal Year Obligations.** No provision of this Agreement shall be construed or interpreted as creating an indebtedness or a multiple fiscal year direct or indirect debt, or other multiple year financial obligation whatsoever of Authority within the meaning of any constitutional or statutory debt limitation provision, including, without limitation, Article XI, §§ 1, 2 and 6, and Article X, § 20 of the Colorado Constitution. This Agreement shall not directly or indirectly obligate Authority to make any payments beyond the funds legally available to it for the then current fiscal year. No provision of this Agreement shall be construed to pledge or create a lien on any class or source of monies of Authority, nor shall any provision of this Agreement restrict or limit the discretion of Authority in the budgeting and appropriating its funds.

12. **Termination for Convenience.** Authority reserves the full right to terminate or suspend, for any reason or no reason, all or a portion of the Services under this Agreement

by giving sixty (60) days written notice to PSI. Upon termination or suspension of Services, PSI shall immediately deliver to Authority any documents then in existence, that have been prepared by PSI and/or which are Authority's property. If any portion of the Services shall be terminated or suspended, Authority shall pay PSI equitably for all Services properly performed pursuant to this Agreement up to and including the date of termination or suspension, as the case may be.

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate original as of the date set forth above. This Agreement must have the signature of an authorized person of Consultant on both original copies.

AUTHORITY:

CHERRY CREEK BASIN WATER QUALITY AUTHORITY, a quasi-municipal corporation and political subdivision of the State of Colorado

By: _____
Joshua Rivero, Chair

Attest:

John A. McCarty, Secretary/Treasurer

Approved as to Form:

Timothy J. Flynn, General Counsel
Cherry Creek Basin Water Quality Authority

This Agreement is accepted by:

PINPOINT SYSTEMS, INC.

By: _____
Jeff R. Warren, Vice President

By execution, signer certifies that he or she is authorized to accept and bind Consultant to the terms of this Agreement.

ADMINISTRATIVE SUPPORT AGREEMENT

THIS ADMINISTRATIVE SUPPORT AGREEMENT (“Agreement”) is made and entered into this 19th day of October, 2023, to be effective as of January 1, 2024 (“Effective Date”), by and between the **CHERRY CREEK BASIN WATER QUALITY AUTHORITY**, a quasi-municipal corporation and political subdivision of the State of Colorado (“Authority”), and **VALERIE ENDYK**, an individual (“Endyk”), whose address is 1242 West Geddes Avenue, Littleton, Colorado 80120 telephone number (303) 718-6636. Consultant and Authority may hereinafter singularly be referred to as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, Authority entered into an Administrative Support Agreement with Endyk dated to be effective January 1, 2023, which expires December 31, 2023;

WHEREAS, Authority desires to utilize Endyk’ s clerical and administrative skills for calendar year 2024; and

WHEREAS, Endyk is willing to perform clerical and administrative services for the Authority during calendar year 2024, upon the terms and conditions as hereinafter set forth.

NOW, THEREFORE, in consideration of the promises and other good and valuable consideration, Authority and Endyk agree as follows:

1. **Scope of Services.** Endyk agrees to provide clerical and administrative support to the Authority in accordance with terms and provisions of this Agreement. By way of explanation and not limitation, the type, nature and extent of the clerical and administrative support that Endyk will provide is more particularly described on **Exhibit A**, as attached hereto and incorporated herein by this reference (“Administrative Services”).

2. **Authorization to Provide Services.** Endyk is hereby authorized to provide Administrative Services which Endyk agrees to provide in accordance with the Authority’s time and completion requirements. The Authority and Endyk will agree generally on the periods of time each week when Endyk believes she will be available to provide Administrative Services if requested to do so either verbally or in writing by a member of the Authority’s Executive Committee, legal counsel or any other representative of the Authority as designed by the Executive Committee (“Authorized Representatives”).

3. **Compensation.** For the Administrative Services provided by Endyk the Authority will compensate Endyk at the rate of seventy-nine dollars (\$79.00) per hour, or if agreed upon in advance by Endyk and the Authority, on a per task flat fee basis. Notwithstanding any other provision contained in this Agreement to the contrary however, Endyk shall not spend more than twenty (20) hours per week providing Administrative Services to the Authority, without the prior express written consent of an Authorized Representative. If Endyk determines at any time that the average weekly time may exceed twenty (20) hours per week for the contract period, Endyk shall request authorization to increase her contract hours by one hundred (100) hours (10% of total approved time), which approval may be granted by any member of the Executive Committee. No later than seven (7) days after the end of each month Endyk will submit an invoice to the Authority detailing the hours spent and the type of Administrative Services that Endyk provided to the Authority during the prior month.

4. **Payment of Invoices.** Once an invoice is received from Endyk it will be reviewed and if approved, will be paid within thirty (30) days from the date the invoice was submitted; provided, however, the Authority have the right to withhold payment as to any matter on an invoice that is disputed, or which requires clarification or further information to be provided to the Authority.

5. **Responsibility for Costs.** Endyk shall be responsible for all costs and expenses related to the Administrative Services that are provided hereunder unless otherwise agreed to in advance by an Authorized Representative and Endyk. Notwithstanding the foregoing, Endyk and the Authority recognize that from time-to-time Endyk will need to advance costs on behalf of the Authority. Endyk will have authority to advance funds and be reimbursed therefore, provided the costs advanced are not in excess of \$500 in any given month. Anything in excess of such \$500 amount will need to have advance approval from the Authority. Endyk shall also have authority to utilize the Authority's debit card, provided that debit card purchases may not exceed \$2,000, in any month without the prior written approval of a member of the Authority's Executive Committee.

6. **Term and Termination.** This Agreement shall remain in effect for until December 31, 2024, unless terminated sooner as hereinafter provided. This Agreement may be terminated prior to December 31, 2024, by either Party for any reason or no reason, upon ten (10) days advance written notice to the other Party. Upon termination, Endyk will be paid for all Administrative Services provided up to the date of termination.

7. **Ownership of Work Product.** It is agreed that any and all documents, recommendation or information provided to Authority by Endyk in connection with the Administrative Services that Endyk performs for the Authority and shall be the property of the Authority.

8. **Confidentiality of Information.** Except as required by law, or is necessary for the performance of Administrative Services, Endyk shall retain in strictest confidence all information furnished by Authority, and the results of any reports or studies Endyk participates in or has access to in connection with the provision of Administrative Services for the Authority. Endyk shall have no confidentiality obligation however, with respect to information that: (i) becomes generally available to the public other than as a result of disclosure by Endyk; or (ii) was available to Endyk on a non-confidential basis prior to its disclosure by Authority; and (iii) becomes available to Endyk from a third-party who is not, to the knowledge of Endyk, bound to retain such information in confidence.

9. **Compliance with Laws.** In providing Administrative Services to the Authority, Endyk shall comply with all applicable laws, rules and regulations, applicable to the Administrative Services, including, but not limited to, all federal, state and local laws.

10. **Independent Contractor.** In the performance of Administrative Services, Endyk shall be for all purposes, an independent contractor, and not an employee or agent of the Authority. Endyk and her employees and subconsultants, if any, shall in no way represent themselves to third parties as agents or employees of the Authority. As an independent contractor, Endyk is not entitled to workers' compensation benefits and is obligated to pay federal and state income tax on any monies earned pursuant to this Agreement.

11. **Assignability.** This Agreement shall not be assigned by Endyk without the prior express written consent of an Authorized Representative, which consent may be withheld for any or no reason.

12. **Binding Effect.** This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns.

13. **Severability.** In the event any one or more of the provisions of this Agreement shall for any reason be held to be invalid or unenforceable, the remaining provisions of this Agreement shall be unimpaired, and shall remain in full force and effect and shall be binding upon the Parties hereto.

14. **Counterpart Signatures.** This Agreement can be executed in counterparts, each of which taken together shall constitute one original document.

15. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado.

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate original as of the dates set forth below.

AUTHORITY:

CHERRY CREEK BASIN WATER QUALITY AUTHORITY, a quasi-municipal corporation and political subdivision of the State of Colorado

By: _____
Name
:
Executive Committee Member

Approved As to Form:

Timothy J. Flynn, General Counsel
for the Cherry Creek Basin Water
Quality Authority

CONSULTANT:

Valerie Endyk

EXHIBIT A

Scope of Services

1. Provide clerical and administrative assistance to the Authority's Technical Manager and Executive Committee, including but not limited to setting up, facilitating, and attending when requested to do so, monthly Authority Technical Advisory Committee (TAC) and Authority Board meetings currently held at the Southeast Metro Stormwater Authority office and/or remotely via Zoom. As well as attending weekly regularly scheduled progress meetings with the Authority's Management Team and Consultants.
2. Assemble TAC and Authority's Board meeting packets for monthly meetings, including distribution to all participants via email, and the sending of calendar invitations.
3. Assist the Authority's Technical Manager and Executive Committee with such things as being the administrative point of contact for the Authority, checking voice messages and emails, responding to and communicating with consultants, contractors, members of the Authority Board and other interested parties.
4. Coordinate with the Authority's Technical Manager in connection with the maintenance of an accessible, secure, organized, and complete filing system for all Authority official records, whether in electronic or paper form and serve as the Authority's official records custodian. To the extent practical cause all paper documents and forms used or received by Authority to be converted to electronic format for permanent storage purposes.
5. Coordinate with the Authority's Technical Manager and Executive Committee in procuring and maintaining the Authority's insurance, including but not limited to general liability, public official's property, automobile, and workers complementation coverages. The procurement of the Authority's insurance shall be coordinated with the Authority's insurance agent and legal counsel.
6. When requested by the Board, the Executive Committee, or as necessary, coordinate with the Technical Manager to facilitate the placing of information on, and the removal of information from the Authority's website and any Authority social media platforms.
7. Such other clerical and administrative support as may be requested from

time-to-time by the Authority's Technical Manager, and/or its Executive Committee, including but not limited to coordinating with the Authority's Technical Manager and Executive Committee on review and approval of Authority vendor and contractor invoices, and submittal of approved invoices to the Authority's accountant for payment.

8. The Scope of Services as set forth above may be reduced or expanded from time-to-time as the Authority's Technical Manager and/or Executive Committee determine appropriate provided any such expansion must be acceptable to Endyk.
9. Endyk is not an agent of the Authority and shall have no power to bind or commit the Authority to any financial or other matter unless previously approved and/or authorized by the Authority's Technical Manager and/or Executive Committee.



ACTION ITEM MEMORANDUM

To: CCBWQA Board of Directors
From: Richard Borchardt, Pollution Abatement Project Manager
Date: October 19, 2023
Subject: Cherry Creek Stream Reclamation upstream of Scott Road – Amendment to Intergovernmental Agreement (IGA Amendment)

Request: The Board authorizes the execution of the IGA Amendment for the stream reclamation on Cherry Creek upstream of Scott Road and an expenditure for an amount not to exceed \$409,000.

Project: The Project is on Cherry Creek upstream of Scott Road (Project, see Figure on Right) in Douglas County (County) and is a partner project with the County, CCBWQA, and Mile High Flood District (MHFD) which is the project lead. Muller Engineering is the design consultant. The proposed stream reclamation benefits the water quality in Cherry Creek and the Cherry Creek Reservoir by reducing bed and bank erosion and immobilizing Phosphorus in the adjacent soils. It is estimated that this 0.81 mile long-project will immobilize 73 pounds of phosphorus annually.



Funding: The current funding level for the project (\$4,265,000, see Table 1) includes a previous contribution of \$900,000 from the CCBWQA. The attached IGA Amendment brings in additional funding of \$1,700,000 (\$500,000 MHFD; \$300,000 County; and \$499,000 CCBWQA which was not included in the 2023 approved budget) for the Project. Due to project cost increases, MHFD and Douglas County have increased their 2023 funding to the Project, and MHFD has requested CCBWQA participate in the cost increase (Attachment 1). The total current Project costs are estimated at \$5,477,012 from the IGA Amendment.

Funding Source	Project Sponsor %	2023			
		Previously Contributed	Special Funds Transfer	Additional Contribution	Maximum Contribution
MHFD	35%	\$1,425,000	\$0	\$500,000	\$1,925,000
Douglas County	41%	\$1,940,000	\$3,012	\$300,000	\$2,243,012
CCBWQA	24%	\$900,000	\$0	\$409,000	\$1,309,000
Total	100%	\$4,265,000	\$3,012	\$1,209,000	\$5,477,012

Table 1

CCBWQA's participation of \$409,000 is needed to take the project to construction. Additional cost considerations and analysis have been included in **Table 2**¹, attached to this memo, and are discussed here. When considering the unit cost of stream reclamation per mile without cost sharing, the Project's unit cost is \$6,762,000 per mile, whereas analysis of 10 projects provides an average unit cost of \$6,771,000 per mile. When considering unit cost of stream reclamation with cost sharing, the Project's unit cost is \$1,616,000 per mile, compared with the unit cost of stream reclamation with CCBWQA's participation at 25% (the historical limit of partner projects) of the average unit cost of 10 projects is \$1,693,000 per mile. In terms of unit cost per pound of phosphorus immobilized with cost sharing, this Project's unit cost approximately \$963 per pound, whereas analysis of 10 projects provides an average cost of \$1,016 per pound. When considering the metrics discussed above, R2R Engineers concludes that CCBWQA's funding level on the Project seems reasonable.

TAC Review: TAC recommended that the Board authorize the execution of the IGA Amendment and an expenditure for an amount not to exceed \$409,000.

Budget: CCBWQA's 2023 Budget doesn't include funding for this Project. Likely delays in project construction will reduce CCBWQA's Pollution Abatement Fund (PAF) capital expenditures by \$1,310,000 of which \$409,000 could be used towards this Project.

Motion: **I move that the Board authorizes the execution of the IGA Amendment for the stream reclamation on Cherry Creek upstream of Scott Road and an expenditure for an amount not to exceed \$409,000.**



Photo of Cherry Creek near middle of Project

¹ Unit costs of stream reclamation per mile and per pound of phosphorus of 10 completed projects are based on adjusting project costs to 2023 dollars using ENR building cost index then annualizing costs completed project over 35 years at 4% interest rate.

Table 2 - Cost considerations on Cherry Creek at Scott Road and Dove Creek from Otero to Pond D-1						
Project analysis based on Table 3 of Draft CIP dated 10/6/23						
Project Title	Length (mile)	2023 construction cost (1000\$)	2023 unit cost of stream reclamation per mile w/o cost sharing (1000\$/mile)	2023 unit cost of stream reclamation per mile w/CCBWQA at 25% historical limit on partner projects (1000\$/mile)	2023 unit cost per pound of phosphorus - w/o cost sharing (\$/pound of P)	2023 unit cost per pound of phosphorus - w/CCBWQA at 25% historical limit on partner projects (\$/pound of P)
Minimum of 10 Projects from Table 3 of Draft CIP	0.30	\$ 1,532	\$ 3,145	\$ 786	\$ 1,890	\$ 472
Maximum of 10 Projects from Table 3 of Draft CIP	0.92	\$ 7,531	\$ 13,840	\$ 3,460	\$ 8,292	\$ 2,073
Mean of 10 Projects from Table 3 of Draft CIP	0.52	\$ 3,644	\$ 6,771	\$ 1,693	\$ 4,064	\$ 1,016
	Length (mile)	Construction cost (1000\$)	Unit cost per mile of stream reclamation per mile w/o cost sharing (1000\$/mile)	Unit cost per mile of stream reclamation per - w/cost sharing (1000\$/mile)	Unit cost per pound of phosphorus - w/cost sharing (\$/pound of P)	
Cherry Creek upstream of Scott Road	0.81	\$ 5,477	\$ 6,762	\$ 1,616	\$ 963	
Dove Creek from Otero Avenue to Pond D1	0.51	\$ 4,960	\$ 9,725	\$ 1,517	\$ 909	
Unit cost is higher than mean of 10 projects from Table 3 of Draft CIP						
Unit cost is lower than the mean of 10 projects from Table 3 of Draft CIP						
Unit cost per pound of phosphorus - w/cost sharing is lower than the mean of 10 projects from Table 3 of Draft CIP						
Using unit cost per pound of phosphorus of \$1,016 would justify a contribution of up to 17.5%, instead of the 15.6% currently requested in the 10/19/23 Action Item Memo (see alternative presented in Table 2 of Draft CIP						

FIFTH AMENDMENT TO
AGREEMENT REGARDING
DESIGN AND CONSTRUCTION
OF DRAINAGE AND FLOOD CONTROL IMPROVEMENTS FOR
CHERRY CREEK UPSTREAM OF SCOTT ROAD
DOUGLAS COUNTY

Agreement No. 20-01.12E
Project No. 107751

THIS FIFTH AMENDMENT TO AGREEMENT (hereinafter called "FIFTH AMENDMENT"), by and among URBAN DRAINAGE AND FLOOD CONTROL DISTRICT D/B/A MILE HIGH FLOOD DISTRICT (hereinafter called "DISTRICT"), CHERRY CREEK BASIN WATER QUALITY AUTHORITY (hereinafter called "CCBWQA"), and DOUGLAS COUNTY (hereinafter called "COUNTY") and collectively sometimes referred to as the "PARTIES", and singularly as a "PARTY";

WITNESSETH:

WHEREAS, the PARTIES entered into an "Agreement Regarding Design and Construction of Drainage and Flood Control Improvements for Cherry Creek Upstream of Scott Road, Douglas County" (Agreement No. 20-01.12) dated October 21, 2020 as amended by a First Amendment (Agreement No. 20-01.12A) dated August 16, 2021 as amended by a Second Amendment (Agreement No. 20-01.12B) dated October 29, 2021 and a Third Amendment (Agreement No. 20-01.12C) dated August 12, 2022 (hereinafter collectively referred to as the "AGREEMENT") and a Fourth Amendment (Agreement No. 20-01.12D) dated November 1, 2022 (hereinafter collectively referred to as the "AGREEMENT"); and

WHEREAS, the PARTIES reaffirm their intent to construct drainage and flood control improvements that have water quality benefits for Cherry Creek upstream of Scott Road (hereinafter called "PROJECT"); and

WHEREAS, PARTIES desire to increase the level of funding by \$1,212,011.83 which includes a transfer of \$3,011.83 in Douglas County funding from Cherry Creek at Hess Road Agreement 10-10.05 as Amended, and an additional contribution of \$1,209,000.00 in new capital funds; and

WHEREAS, DISTRICT's Board of Directors has authorized additional DISTRICT financial participation for PROJECT (Resolution No. 78, Series of 2023); and

WHEREAS, the Board of Directors of CCBWQA, the County Commissioners of COUNTY, and the Board of Directors of DISTRICT have each authorized, by appropriation or resolution, their respective PARTY's share of all of PROJECT costs.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the PARTIES hereto agree as follows:

1. Paragraph 4. PROJECT COSTS AND ALLOCATION OF COSTS Subparagraphs B, C, and D are hereby deleted from the AGREEMENT in their entirety and replaced as follows:
 4. PROJECT COSTS AND ALLOCATION OF COSTS
 - B. It is understood that PROJECT costs as defined above are not to exceed \$5,477,011.83 without amendment to this AGREEMENT.

PROJECT costs for the various elements of the effort are estimated as follows:

	<u>ITEM</u>	<u>AS AMENDED</u>	<u>PREVIOUSLY AMENDED</u>
1.	Final Design	\$ 1,100,000	\$ 650,000
2.	Construction *	\$ 4,077,011.83	\$ 3,615,000
3.	Contingency	\$ 300,000	\$ -0-

Grand Total \$ 5,477,011.83 \$ 4,265,000

*It is anticipated that additional funds for construction shall be added by amendment to this AGREEMENT at a future date.

This breakdown of costs is for estimating purposes only. Costs may vary between the various elements of the effort without amendment to this AGREEMENT provided the total expenditures do not exceed the maximum contribution by all PARTIES plus accrued interest.

C. Based on total PROJECT costs, the maximum percent and dollar contribution by each PARTY shall be:

	<u>Percentage Share</u>	<u>Previously Contributed</u>	<u>Special Funds Transfer</u>	<u>Additional Contribution</u>	<u>Maximum Contribution</u>
DISTRICT	35%	\$ 1,425,000		\$500,000	\$ 1,925,000
CCBWQA	24%	\$ 900,000		\$409,000	\$ 1,309,000
COUNTY	41%	\$1,940,000	\$3,011.83	\$300,000	\$2,243,011.83
TOTAL	100.00%	\$4,265,000	\$3,011.83	\$1,209,000	\$5,477,011.83

D. It is understood and agreed that notwithstanding any other provision contained herein to the contrary, any additional contribution of a PARTY hereunder, whether direct or contingent, shall under no circumstances exceed the PARTY'S Maximum Contribution indicated above without the prior express written consent of the PARTY.

E. At the request of COUNTY, the following COUNTY funds may be transferred to PROJECT from a separate special fund held by DISTRICT:

Transfer from: T&A #5608
 Account No. 50-05-76111-005608
 Amount: \$3,011.83

2. Paragraph 5. MANAGEMENT OF FINANCES is deleted in its entirety from the AGREEMENT and replaced as follows:

5. MANAGEMENT OF FINANCES

As set forth in DISTRICT policy (Resolution No. 11, Series of 1973, Resolution No. 49, Series of 1977, and Resolution No. 37, Series of 2009), the funding of a local body's share may come from its own revenue sources or from funds received from state, federal or other sources of funding without limitation and without prior Board approval.

Payment of each PARTY's full share (CCBWQA - \$1,309,000; COUNTY - \$2,243,011.83; DISTRICT - \$1,925,000) shall, to the extent not already paid, be made to DISTRICT subsequent to execution of this AGREEMENT and within thirty (30) days of request for payment by DISTRICT. The payments by PARTIES shall be held by DISTRICT in a special fund to pay for increments of PROJECT as authorized by PARTIES, and as defined herein. DISTRICT shall provide a periodic accounting of PROJECT funds as well as a periodic notification to CCBWQA and COUNTY of any unpaid obligations. Any interest earned by the monies contributed by PARTIES shall be accrued to the special fund established by DISTRICT for PROJECT and such interest shall be used only for PROJECT upon approval by the contracting officers (Paragraph 13).

It is understood and agreed that a portion of each PARTY'S above referenced share has previously been paid to DISTRICT as set forth in Paragraph 4. C. in the column labeled "Previously Contributed".

Within one (1) year of completion of PROJECT if there are monies including interest earned remaining which are not committed, obligated, or disbursed, each PARTY shall receive a share of such monies, which shares shall be computed as were the original shares; or at CCBWQA and COUNTY request, CCBWQA's and COUNTY's share of remaining monies shall be transferred to another special fund held by DISTRICT.

3. All other terms and conditions of this AGREEMENT shall remain in full force and effect.

WHEREFORE, the PARTIES hereto have caused this FIFTH AMENDMENT to be executed by properly authorized signatories as of the date and year written below.

URBAN DRAINAGE AND
FLOOD CONTROL DISTRICT D/B/A
MILE HIGH FLOOD DISTRICT

By _____

Name: Laura A. Kroeger

Title: Executive Director

Date _____

Checked By

BOARD OF COUNTY COMMISSIONERS
OF THE COUNTY OF DOUGLAS

By: _____
Chair

Date _____

ATTEST:

Kristin Randlett, Deputy Clerk to the Board

APPROVED AS TO CONTENT:

Douglas J. DeBord, County Manager

APPROVED AS TO LEGAL FORM:

Chris Pratt, Assistant County Attorney

APPROVED AS TO FISCAL CONTENT:

Andrew Copland, Director of Finance

CHERRY CREEK BASIN
WATER QUALITY AUTHORITY

CCBWQA Checked by

By _____

Name Joshua Rivero

Title CCBWQA Chairman

Date _____

Attest:

APPROVED AS TO FORM:

Timothy J. Flynn, General Counsel for CCBWQA



ACTION ITEM MEMORANDUM

To: CCBWQA Board of Directors
From: Richard Borchardt, Pollution Abatement Project Manager
Date: October 19, 2023
Subject: Dove Creek Stream Reclamation from Otero Avenue to Pond D1 – Intergovernmental Agreement (IGA)

Request: The Board authorizes the preparation of the IGA with Southeast Metro Stormwater Authority (SEMSWA) for the second phase of construction of the Dove Creek stream reclamation, an expenditure for an amount not to exceed \$540,000, and a member of the executive committee to execute the IGA.

Project: The design has been completed on Dove Creek from Otero Avenue to Pond D1 located upstream of Broncos Parkway in the City of Centennial. RESPEC is the design engineer. The construction of the first phase from Otero Avenue to Chambers Road was completed early this year by Concrete Express. The Project sponsors are CCBWQA and SEMSWA which is the project lead. Dove Creek is a tributary to Cherry Creek. The proposed stream reclamation benefits the water quality in Cherry Creek and the Cherry Creek Reservoir by reducing bed and bank erosion and immobilizing phosphorus in the adjacent soils. It is estimated that this 0.51 mile long-project will immobilize 46 pounds of phosphorus annually. The second phase of construction between Chambers Road and Pond D1 is scheduled for early 2024.



Funding: The second phase of construction is currently estimated at \$2,160,000 (\$540,000 CCBWQA and \$1,620,000 SEMSWA, see **Table 1**). CCBWQA’s participation in the overall project is 15.6% which is less than the 25% the limit historically used on partner projects. SEMSWA’s participation for the second phase of construction is anticipated in 2024 and a future IGA Amendment may be needed.

Funding Source	2021	2022		2023 Phase 1 Construction		Phase 2 Construction			
	Engineering Design	Additional Annual Funding	Cumulative Project Funding	Additional Annual Funding	Cumulative Project Funding	Project Sponsor %	2023 Additional Annual Funding	2024 Additional Annual Funding	Cumulative Project Funding
SEMSWA	\$100,000	\$200,000	\$300,000	\$2,262,000	\$2,562,000	84.3%	\$0	\$1,620,000	\$4,182,000
CCBWQA	\$25,000	\$75,000	\$100,000	\$138,000	\$238,000	15.6%	\$540,000	\$0	\$778,000
Total	\$125,000	\$275,000	\$400,000	\$2,400,000	\$2,800,000	100.0%	\$540,000	\$1,620,000	\$4,960,000

Table 1

CCBWQA’s participation of \$540,000 is needed to take the project to construction. Additional cost

considerations and analysis have been included in **Table 2**¹ attached to this memo and are discussed here. When considering the unit cost of stream reclamation per mile without cost sharing, the Project's unit cost is \$9,725,000 per mile, whereas analysis of 10 projects provides an average unit cost of \$6,771,000 per mile. Since the Project's unit cost is higher than the average unit cost, additional analysis is needed to determine whether CCBWQA's participation is appropriate. When considering unit cost of stream reclamation with cost sharing, the Project's unit cost is \$1,517,000 per mile, compared with the unit cost of stream reclamation with CCBWQA's participation at 25% (the historical limit of partner projects) of the average cost of 10 projects is \$1,693,000 per mile. In terms of cost per pound of phosphorus immobilized with cost sharing, this Project is estimated to cost approximately \$909 per pound, whereas analysis of 10 projects provides an average cost of \$1,016 per pound. When considering the metrics of unit costs with cost sharing for per mile of stream reclamation and per pound of phosphorus both support CCBWQA's participation at 15.6%. It is noted that this approach could only justify a contribution by CCBWQA of up to 17.5%, without additional or a site-specific analysis.

The project includes a retaining wall in Phase 1 to accommodate the stream reclamation at a cost of \$473,000 and two sediment capture areas at a cost of \$502,000, which are included in the cost analysis above and explain the higher unit cost of stream reclamation per mile. The sediment capture areas do provide additional water quality benefits too. SEMSWA has cleaned out the sediment capture in Phase 1 three times already. The water quality benefits of the sediment capture areas were not included, as the unit cost metrics already support CCBWQA's participation of 15.6%.

Considering the information above, R2R Engineers concludes that CCBWQA's funding level on the Project seems reasonable.

- TAC Review:** TAC recommended that the Board authorizes the preparation of the IGA, an expenditure for an amount not to exceed \$540,000, and a member of the executive committee to execute the IGA.
- Budget:** CCBWQA's 2023 Budget includes \$138,000 for this Project. Likely delays in project construction will reduce CCBWQA's Pollution Abatement Fund (PAF) capital expenditures by \$1,310,000; \$540,000 could be used towards the Phase 2 construction, bringing CCBWQA's 2023 funding to a total of \$678,000.
- Motion:** **I move to recommend that the Board authorizes the preparation of IGA with SEMSWA for the second phase of construction of the Dove Creek Stream Reclamation, an expenditure for an amount not to exceed \$540,000, and a member of the executive committee to execute the IGA.**

¹ Unit costs of stream reclamation per mile and per pound of phosphorus of 10 completed projects are based on adjusting project costs to 2023 dollars using ENR building cost index then annualizing costs completed project over 35 years at 4% interest rate.



Photo of Dove Creek Phase 1 construction completed sediment capture area downstream of Otero Avenue



Photo of Dove Creek Phase 1 construction completed stream reclamation downstream of Otero Avenue



Photo of Dove Creek downstream of Chambers Road (Courtesy of Molly Trujillo), area of Phase 2 construction

Table 2 - Cost considerations on Cherry Creek at Scott Road and Dove Creek from Otero to Pond D-1						
Project analysis based on Table 3 of Draft CIP dated 10/6/23						
Project Title	Length (mile)	2023 construction cost (1000\$)	2023 unit cost of stream reclamation per mile w/o cost sharing (1000\$/mile)	2023 unit cost of stream reclamation per mile w/CCBWQA at 25% historical limit on partner projects (1000\$/mile)	2023 unit cost per pound of phosphorus - w/o cost sharing (\$/pound of P)	2023 unit cost per pound of phosphorus - w/CCBWQA at 25% historical limit on partner projects (\$/pound of P)
Max of 10 Projects from Table 3 of Draft CIP	0.30	\$ 1,532	\$ 3,145	\$ 786	\$ 1,890	\$ 472
Min of 10 Projects from Table 3 of Draft CIP	0.92	\$ 7,531	\$ 13,840	\$ 3,460	\$ 8,292	\$ 2,073
Mean of 10 Projects from Table 3 of Draft CIP	0.52	\$ 3,644	\$ 6,771	\$ 1,693	\$ 4,064	\$ 1,016
	Length (mile)	Construction cost (1000\$)	Unit cost per mile of stream reclamation per mile w/o cost sharing (1000\$/mile)	Unit cost per mile of stream reclamation per - w/cost sharing (1000\$/mile)	Unit cost per pound of phosphorus - w/cost sharing (\$/pound of P)	
Dove Creek from Otero Avenue to Pond D1	0.51	\$ 4,960	\$ 9,725	\$ 1,517	\$ 909	
Unit cost is higher than mean of 10 projects from Table 3 of Draft CIP						
Unit cost is lower than the mean of 10 projects from Table 3 of Draft CIP						
Unit cost per pound of phosphorus - w/cost sharing is lower than the mean of 10 projects from Table 3 of Draft CIP						
Using unit cost per pound of phosphorus of \$1,016 would justify a contribution of up to 17.5%, instead of the 15.6% currently requested in the 10/19/23 Action Item Memo (see alternative presented in Table 2 of Draft CIP						



ACTION ITEM MEMORANDUM

To: CCBWQA Board of Directors

From: Jane Clary, Technical Manager and Bill Ruzzo, Executive Committee

Date: October 12, 2023

Subject: Pollution Abatement Project Manager Position

Request: That the CCBWQA Board of Directors authorize the Executive Committee and Technical Manager to prepare a scope of work for the Pollution Abatement Project Manager (PAPM) for public posting, request proposals/qualifications from potential candidates, pursue candidates to fill the PAPM position and recommend a candidate to the Board.

Issue: On September 14, 2023, CCBWQA PAPM Manager, Rich Borchardt (R2R Engineers), provided notification to the CCBWQA Technical Manager that he would not be submitting a scope of work for 2024 PAPM services. Rich has agreed to provide transition support for a new PAPM through March 31, 2024, as needed. The CCBWQA Executive Committee and staff have developed a “back-up” plan for CCBWQA staff to cover selected projects until a PAPM Manager is selected. Additionally, some projects may be integrated into existing scopes of work for staff if recommended by the Executive Committee and approved by the Board. This issue was also discussed at the October TAC meeting, with general consensus being that a PAPM position is needed, due in part to the number of projects and level of interaction required with partners on these projects.

Budget: For 2024 budget planning, the PAPM budget has been estimated at the same approximate level as R2R’s 2023 budget, with an additional limited support budget for Rich Borchardt to support transition of the PAPM position.

Motion: The CCBWQA Board of Directors moves to direct the Executive Committee and Technical Manager to prepare a scope of work for the Pollution Abatement Project Manager (PAPM) position, publicly post a request for proposal/qualifications for the position, pursue candidates to fill the PAPM position, and recommend a candidate to the Board.

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
TABLE 1 - SUMMARY OF POTENTIAL POLLUTANT REDUCTION FACILITIES
REVISIONS FOR 2024 - 2033 CIP

Date: **October 6, 2023**

Color Code: **Blue:** Project Completed

Green: Planned for design/construction during 5-year period

Updated based on 2023 total project cost and stream length information. O&M costs adjusted to be similar cost baseline. Projects that were bid/constructed in phases, were separated into those phases to facilitate adjustment to 2023 costs on PRFs for WQ Analysis.

Please see comment for more information and include in presentation to TAC and Board.

Projects highlighted so that original project information compared with updated project information (denoted with *).

Project under consideration for additional funding from CCBWQA in 2023, final option will be included in CIP when funding decision and direction are received from TAC and Board.

Proj. Designation	Project Title	Status	Description	Design Basis				Projected Loads	Projected Treatment				Cost Estimate (1000\$)							Unit Cost (\$/pound)		Note				
				PRF Type	Quantity	Unit	Rate		Volume	Rate	Total	Source	Removal	lbs Removed	Capital	Land Acquisition	Water Augment ⁸	Capital Replace ⁹	O&M	Annual Cost @ 4%	CCBWQA Share (%)		CCBWQA Share (\$)	w/o cost sharing	w/cost sharing	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)		
CCR-1	Reservoir Destratification (mixing)	Officially start-up April 2008	Use inlake mixing to minimize algae blooms, therefore chlorophyll a	369	sq mi	n/a	n/a	n/a	n/a	n/a	n/a	810	lbs/season	\$ 968			\$ 28	\$ 80	100%	\$968	\$ 99	\$ 99				
CCB-1	CCSP Wetlands	Prelim design prepared in 2003 (Ref 1, 8)	Restore 60 Acres of wetlands in multiple phases	369	sq mi	3.5 cfs avg daily flow	1415 af/210 days	0.35	mg/l	1050	lbs/yr	Base flow	600	lbs/season	\$ 1,928	\$ -	\$ -	\$ -	\$ 19	\$ 123	100%	\$1,928	\$ 204	\$ 204	18	
CCB-5.2	Arapahoe/Douglas County Line Stream Stabilization	Project completed w/o Authority participation	Local stream stabilization (L = 2700 ft)	0.51	mi			100	lbs/mi	51	lbs/yr	Storm Flow	90%	46	lbs/year	\$ 1,062	\$ -	\$ -	\$ -	\$ 1	\$ 58	0%	\$0	\$ 1,258	\$ -	2
CCB-5.3	Cottonwood Bridge Stream Stabilization	Project completed by Parker w/o Authority participation	Local stream stabilization (L = 2700 ft)	0.51	mi			100	lbs/mi	51	lbs/yr	Storm Flow	90%	46	lbs/year	\$ 436	\$ -	\$ -	\$ -	\$ 2	\$ 25	0%	\$0	\$ 551	\$ -	2
CCB-5.5	Stroh Road Stream Stabilization	Project completed by Parker w/o Authority participation	Stream stabilization (L = 5000 ft)	0.95	mi			100	lbs/mi	95	lbs/yr	Storm Flow	90%	85	lbs/year	\$ 218	\$ -	\$ -	\$ -	\$ 1	\$ 13	0%	\$0	\$ 149	\$ -	2
CCB-5.7	Cherry Creek Stream Stabilization at Eco-Park (SEMSWA)	IGA w/SEMSWA for design in 2010 and construction in 2011/2012	Local stream stabilization (L = 6850 ft)	1.30	mi			100	lbs/mi	130	lbs/yr	Storm Flow	90%	117	lbs/year	\$ 4,756	\$ -	\$ -	\$ -	\$ 1	\$ 256	24%	\$1,155	\$ 2,191	\$ 532	2, 3
CCB-5.7*	Cherry Creek Stream Stabilization at Eco-Park (SEMSWA)	IGA w/SEMSWA for design in 2010 and construction in 2011/2012	Local stream stabilization (L = 4850 ft)	0.92	mi			100	lbs/mi	92	lbs/yr	Storm Flow	90%	83	lbs/year	\$ 4,756	\$ -	\$ -	\$ -	\$ 2	\$ 257	19%	\$905	\$ 3,106	\$ 591	2, 3, 7
CCB-5.9.1	Cherry Creek Stream Stabilization at 12-Mile Park (CCSP) - Phase I	Design completed in 2011 for Phase I.	Local stream stabilization (L = 500 ft)	0.09	mi			100	lbs/mi	9	lbs/yr	Storm Flow	90%	9	lbs/year	\$ 296	\$ -	\$ -	\$ -	\$ 1	\$ 17	100%	\$296	\$ 1,979	\$ 1,979	2, 20
CCB-5.9.2	Cherry Creek Stream Stabilization at 12-Mile Park (CCSP) - Phase II	Design completed in 2013 for Phase II.	Local stream stabilization (L = 2500 ft)	0.47	mi			100	lbs/mi	47	lbs/yr	Storm Flow	90%	43	lbs/year	\$ 1,429	\$ -	\$ -	\$ -	\$ 1	\$ 78	100%	\$1,429	\$ 1,820	\$ 1,820	2, 20
CCB-5.10	Cherry Creek Stream Stabilization at PJCOS (Vermillion Creek, PJMD.)	Design completed by PJMD. Authority is funding partner in design	Local stream stabilization (L = 5100 ft)	0.97	mi			100	lbs/mi	97	lbs/yr	Storm Flow	90%	87	lbs/year	\$ 3,017	\$ -	\$ -	\$ -	\$ 2	\$ 164	21%	\$643	\$ 1,882	\$ 401	2, 3
CCB-5.11	Cherry Creek Stream Stabilization at Norton Farms (Parker)	Conceptual design by UDFCD identified priority 3	Local stream stabilization (L = 2200 ft)	0.42	mi			100	lbs/mi	42	lbs/yr	Storm Flow	90%	38	lbs/year	\$ 900	\$ -	\$ -	\$ -	\$ 1	\$ 49	28%	\$252	\$ 1,313	\$ 368	2, 3
CCB-5.11*	Cherry Creek Stream Stabilization at Norton Farms (Parker)	Conceptual design by UDFCD identified priority 3	Local stream stabilization (L = 2500 ft)	0.47	mi			100	lbs/mi	47	lbs/yr	Storm Flow	90%	43	lbs/year	\$ 1,103	\$ -	\$ -	\$ -	\$ 1	\$ 60	23%	\$255	\$ 1,410	\$ 326	2, 3
CCB-5.12	Cherry Creek Stream Stabilization at Pine Lane	Project completed by Parker w/o Authority participation	Local stream stabilization (L = 1500 ft)	0.28	mi			100	lbs/mi	28	lbs/yr	Storm Flow	90%	26	lbs/year	\$ 500	\$ -	\$ -	\$ -	\$ 1	\$ 28	0%	\$0	\$ 1,087	\$ -	
CCB-5.14	Cherry Creek Stream Reclamation - CCSP to Eco Park (Ph II to V)	IGA w/SEMSWA for design in 2010	Local stream stabilization (L = 11000 ft)	2.08	mi			100	lbs/mi	208	lbs/yr	Storm Flow	90%	188	lbs/year	\$ 10,200	\$ -	\$ -	\$ -	\$ 1	\$ 547	25%	\$2,499	\$ 2,920	\$ 715	
CCB-5.14B	Cherry Creek Stream Reclamation - Valley Country Club	Projects with UDFCD, SEMSWA, and Aurora. Phases started in 2010.	Local stream stabilization (L = 2000 ft = 1400 ft on Cherry Creek and 600 ft. on Tributary)	0.38	mi			100	lbs/mi	38	lbs/yr	Storm Flow	90%	34	lbs/year	\$ 2,284	\$ -	\$ -	\$ -	\$ 1	\$ 123	21%	\$484	\$ 3,607	\$ 764	2, 3
CCB-5.15	Cherry Creek Stream Reclamation at Country Meadows (Hess Rd)	Project by Town of Parker and Douglas County	Local stream stabilization (L = 7700 ft)	1.46	mi			100	lbs/mi	146	lbs/yr	Storm Flow	90%	131	lbs/year	\$ 2,170	\$ -	\$ -	\$ -	\$ 2	\$ 118	24%	\$520	\$ 901	\$ 216	2, 3
CCB-5.15*	Cherry Creek Stream Reclamation at Country Meadows (Hess Rd)	Project by Town of Parker and Douglas County	Local stream stabilization (L = 4200 ft)	0.80	mi			100	lbs/mi	80	lbs/yr	Storm Flow	90%	72	lbs/year	\$ 2,788	\$ -	\$ -	\$ -	\$ 2	\$ 151	25%	\$695	\$ 2,114	\$ 527	2, 3, 7
CCB-5.16	Cherry Creek Stream Reclamation - 12 Mile Phase III	Project w/in CCSP identified as Reach 1 in Project CCB-5.14 work.	Local stream stabilization (L = 30 ft.)	0.01	mi			100	lbs/mi	1	lbs/yr	Storm Flow	90%	1	lbs/year	\$ 300	\$ -	\$ -	\$ -	\$ 3	\$ 19	100%	\$300	\$ 37,299	\$ 37,299	2, 20
CCB-5.17.1A	Cherry Creek Stream Reclamation at KOA	Preliminary design completed 2019, Extension Requested by UDFCD and Parker in 2019	Local stream stabilization (L = 1400 ft original, L = 2000 ft with 600 ft extension)	0.38	mi			100	lbs/mi	38	lbs/yr	Storm Flow	90%	34	lbs/year	\$ 2,035	\$ -	\$ -	\$ -	\$ 20	\$ 129	20%	\$375	\$ 3,795	\$ 776	2, 3
CCB-5.17.1A*	Cherry Creek Stream Reclamation at KOA	Preliminary design completed 2019, Extension Requested by UDFCD and Parker in 2019	Local stream stabilization (L = 1400 ft original, L = 2000 ft with 600 ft extension)	0.38	mi			100	lbs/mi	38	lbs/yr	Storm Flow	90%	34	lbs/year	\$ 1,806	\$ -	\$ -	\$ -	\$ 1	\$ 98	18%	\$333	\$ 2,868	\$ 529	2, 3, 7
CCB-5.17.1B	Cherry Creek Stream Reclamation at Dransfeldt	Design in 2021, Construction in 2023	Local stream stabilization (L = 2400 ft original)	0.45	mi			100	lbs/mi	45	lbs/yr	Storm Flow	90%	41	lbs/year	\$ 7,274	\$ -	\$ -	\$ -	\$ 1	\$ 391	12%	\$837	\$ 9,551	\$ 1,099	2, 3
CCB-6.1	Piney Creek Stream Stabilization - Project 1	Authority funded \$118,000 Arapahoe County in 2002.	Restore 5200 lf upstream of Parker Road	22.90	sq mi	n/a	n/a	100	lbs/mi	100	lbs/yr	Storm Flow	90%	90	lbs/year	\$ 997	\$ -	\$ -	\$ -	\$ 10	\$ 63	13%	\$130	\$ 705	\$ 92	2, 3
CCB-6.2	Piney Creek Stream Stabilization - Project 2 U/S Buckley Rd	Project completed w/o Authority participation	Reclaim 1700 lf upstream of Buckley Road	0.32	mi			100	lbs/mi	32	lbs/yr	Storm Flow	90%	29	lbs/year	\$ 998	\$ -	\$ -	\$ -	\$ 1	\$ 54	12%	\$120	\$ 1,880	\$ 226	2, 3

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
TABLE 1 - SUMMARY OF POTENTIAL POLLUTANT REDUCTION FACILITIES
REVISIONS FOR 2024 - 2033 CIP

Date: **October 6, 2023**

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Updated based on 2023 total project cost and stream length information. O&M costs adjusted to be similar cost baseline. Projects that were bid/constructed in phases, were separated into those phases to facilitate adjustment to 2023 costs on PRFs for WQ Analysis.

Please see comment for more information and include in presentation to TAC and Board.

Projects highlighted so that original project information compared with updated project information (denoted with *).

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Proj. Designation	Project Title	Status	Description	Design Basis				Projected Loads		Projected Treatment		Cost Estimate (1000S)										Unit Cost (\$/pound)		Note			
				PRF Type	Quantity	Unit	Rate	Volume	Rate	Total	Source	Removal	lbs Removed	Capital	Land Acquisition	Water Augment ⁸	Capital Replace ⁹	O&M	Annual Cost @ 4%	CCBWQA Share (%)	CCBWQA Share (\$)	w/o cost sharing	w/cost sharing				
39	CCB-6.4	Piney Creek Stream Reclamation - Reaches 6 & 7	Request from UDFCD in 2014	Local stream stabilization (L = 6,000 ft)	1.14	mi			unk		365	lbs/yr	Storm Flow	90%	329	lbs/year	\$ 11,000	\$ -	\$ -	\$ -	\$ 2	\$ 591	25%	\$2,750	\$ 1,800	\$ 450	12
40	CCB-6.4A *	Piney Creek Stream Reclamation - Reach 7	Request from UDFCD in 2014	Local stream stabilization (L = 2,340 ft)	0.44	mi			100	lbs/mi	44	lbs/mi	Storm Flow	90%	40	lbs/year	\$ 3,765	\$ -	\$ -	\$ -	\$ 1	\$ 203	14%	\$512	\$ 5,082	\$ 691	2, 3, 7
41	CCB-6.4B.1 *	Piney Creek Stream Reclamation - Reach 6 upstream of Caley	Request from UDFCD in 2014	Local stream stabilization (L = 1,600 ft)	0.30	mi			100	lbs/mi	30	lbs/yr	Storm Flow	90%	27	lbs/year	\$ 2,896	\$ -	\$ -	\$ -	\$ 1	\$ 156	14%	\$394	\$ 5,726	\$ 779	2, 3, 7
42	CCB-6.4B.2 *	Piney Creek Stream Reclamation - Reach 6 Phase 2	Request from UDFCD in 2014	Local stream stabilization (L = 2,580 ft)	0.49	mi			100	lbs/mi	49	lbs/yr	Storm Flow	90%	44	lbs/year	\$ 2,659	\$ -	\$ -	\$ -	\$ 1	\$ 143	14%	\$361	\$ 3,262	\$ 443	2, 3, 7
43	CCB-7.1	McMurdo Gulch Reclamation (Castle Rock)	Project completed in 2011	Stream Reclamation (L = 15,000 lf)	2.84	mi			100	lbs/mi	284	lbs/yr	Storm Flow	90%	256	lbs/year	\$ 1,470	\$ -	\$ -	\$ -	\$ 28	\$ 107	43%	\$630	\$ 419	\$ 180	
44	CCB-7.2	McMurdo Gulch Reclamation (Castle Rock) 19/20 Project	Design in 2019, Construction in 2020	Stream Reclamation (L = 2,000 lf)	0.38	mi			100	lbs/mi	38	lbs/yr	Storm Flow	90%	34	lbs/year	\$ 1,677	\$ -	\$ -	\$ -	\$ 17	\$ 107	25%	\$420	\$ 3,127	\$ 783	2, 3
45	CCB-7.2 *	McMurdo Gulch Reclamation (Castle Rock) 19/20 Project	Design in 2019, Construction in 2020	Stream Reclamation (L = 2,000 lf)	0.38	mi			100	lbs/mi	38	lbs/yr	Storm Flow	90%	34	lbs/year	\$ 1,156	\$ -	\$ -	\$ -	\$ 1	\$ 63	25%	\$289	\$ 1,846	\$ 462	2, 3, 7
46	CCB-7.3	McMurdo Gulch Reclamation (Castle Rock) 20/21/22 Project	Design in 2020, Construction 2021	Stream Reclamation (L = 3,700 lf)	0.70	mi			100	lbs/mi	70	lbs/yr	Storm Flow	90%	63	lbs/year	\$ 2,460	\$ -	\$ -	\$ -	\$ 25	\$ 156	25%	\$615	\$ 2,480	\$ 620	2, 3
47	CCB-7.3 *	McMurdo Gulch Reclamation (Castle Rock) 20/21/22 Project	Design in 2020, Construction 2021	Stream Reclamation (L = 3,700 lf)	0.70	mi			100	lbs/mi	70	lbs/yr	Storm Flow	90%	63	lbs/year	\$ 1,940	\$ -	\$ -	\$ -	\$ 1	\$ 105	24%	\$466	\$ 1,664	\$ 400	2, 3, 7
48	CCB-12	Bowtie Property PRF	Purchase completed 2003	Stabilize confluence (Ph I) and construct sediment pond (Ph 2)	22	sq mi	2-year flood	300 af	500	mg/l/ton	85	lbs/yr	base flow and minor flood	70% pond 65% wetlands	235	lbs/year	\$ 826	\$ 300	\$ 63	\$ 1.8	\$ 6	\$ 70	100%	\$826	\$ 299	\$ 299	2
49	CCB-13.1	Cottonwood/Peoria Wetlands Pond	Completed 2003. Restorative maintenance required in 2009	Joint funded project with UDFCD, GWV, Arapahoe County	8.30	sq mi							base and flood flows	measured	363	lbs/year	\$ 1,636	\$ -	\$ -	\$ -	\$ 5	\$ 93	12%	\$196	\$ 255	\$ 31	2
50	CCB-13.2	Cottonwood Stream Reclamation in CCSP	Phase I completed in 2004. Phase II completed June 2008 (Ref 2)	11,600 lf of stream reclamation from Peoria to Perimeter Rd. Pond	2.20	mi			100	lbs/mi	220	lbs/yr	base and flood flows	see separate calcs	730	lbs/year	\$ 2,200	\$ -	\$ -	\$ -	\$ 55	\$ 173	100%	\$2,200	\$ 237	\$ 237	2
51	CCB-13.3	Cottonwood Creek Stream Stabilization at Easter Avenue	Authority contributed \$338,000 for construction in 2010.	2,600 lf of stream reclamation from Easter Ave to Briarwood Ave	0.49	mi			100	lbs/mi	49	lbs/yr	Storm Flow	90%	44	lbs/year	\$ 1,350	\$ -	\$ -	\$ -	\$ 1	\$ 73	25%	\$338	\$ 1,655	\$ 414	2
52	CCB-13.4	Peoria Trib B/Airport East and West Pond (Outfall C-1)	Cottonwood Creek Master Planned Improvements. Ponds combined into one.	Combined existing detention ponds and provided EURV	0.35	sq mi			400	lbs/sq mi	140	lbs/yr	Base and storm flow	40%	56	lbs/yr	\$ 523	\$ -	\$ -	\$ -	\$ -	\$ 28	25%	\$131	\$ 500	\$ 125	
53	CCB-17.2	Reservoir Shoreline Stabilization Mountain Loop Trail	Scheduled for construction beginning in 2012	CCSP Recreation sites: Mountain, Lake and Cottonwood Creek Loops (2,300 ft of shoreline)											54	lbs/yr	\$ 1,131	\$ -	\$ -	\$ -	\$ 5	\$ 66	100%	\$1,131	\$ 1,215	\$ 1,215	1, 16
54	CCB-17.3	West Boat Ramp Parking Lot WQ Improvements	Final design completed in 2012	Provide water quality treatment of parking lot runoff.	3.43	ac prkg lot					3	lbs/yr	parking lot	70%	2	lbs/yr	\$ 330	\$ -	\$ -	\$ -	\$ 1	\$ 19	100%	\$330	\$ 8,903	\$ 8,903	1
55	CCB-17.4	East Boat Ramp Shoreline Stabilization Phase II	Identified during 2012 annual PRF inspection	105 lf of bank stabilization	105	lf	0.1 cy/yr/ft		0.14	lbs/lf	14.7	lbs/yr	bank erosion	80%	12	lbs/yr	\$ 91	\$ -	\$ -	\$ -	\$ 2	\$ 7	100%	\$91	\$ 585	\$ 585	1, 16
56	CCB-17.5	East Shade Shelter Shoreline Stabilization Phase II	Identified during 2012 annual PRF inspection	20 lf of bank stabilization	20	lf	0.1 cy/yr/ft		0.14	lbs/lf	2.8	lbs/yr	bank erosion	80%	2	lbs/yr	\$ 18	\$ -	\$ -	\$ -	\$ -	\$ 1	100%	\$18	\$ 431	\$ 431	1, 16
57	CCB-20.1	Detention Pond Retrofit Program - McMurdo Gulch	Phase 1 - McMurdo Gulch	Modify existing ponds to meet current standards for WQ	1	Each			0.40	lbs/Trib Acre	0.4	lbs/yr	Residential		9	lbs/pond/yr	\$ 60	\$ -	\$ -	\$ -	\$ 0	\$ 4	100%	\$60	\$ 396	\$ 396	1, 17
58	CCB-22.2	Happy Canyon Creek Upstream of I-25 (MHFD)	Requested in 2020	3000 lf of stream reclamation	0.57	mi			100	lbs/mi	57	lbs/yr	Storm Flow	90%	51	lbs/year	\$ 5,441	\$ -	\$ -	\$ -	\$ 54	\$ 346	9%	\$500	\$ 6,765	\$ 622	2, 3
59	CCB-22.2*	Happy Canyon Creek Upstream of I-25 (MHFD)	Requested in 2020	3000 lf of stream reclamation	0.57	mi			100	lbs/mi	57	lbs/yr	Storm Flow	90%	51	lbs/year	\$ 4,021	\$ -	\$ -	\$ -	\$ 1	\$ 216	9%	\$362	\$ 4,232	\$ 381	2, 3, 7
61	Proj. Designation	Project Title	Status	Description	Design Basis				Projected Loads			Projected Treatment		Cost Estimate (1000S)													
62				PRF Type	Quantity	Unit	Rate	Volume	Rate	Total	Source	Removal	lbs Removed	Capital from 2023 to 2032 CIP	Total Project Cost update to 2023 \$	Design in 2023 \$	Capital in 2023 \$	Land Acquisition	Water Augment ⁸	Capital Replace ⁹	O&M	Annual Cost @ 4%	CCBWQA Share (%)	CCBWQA Share (\$)			
63	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)		
64	CCB-5.4	Cherry Creek Stream Stabilization at Main Street (Parker)	Conceptual design by UDFCD	Local stream stabilization (L = 4000 ft)	0.76	mi			100	lbs/mi	76	lbs/yr	Storm Flow	90%	68	lbs/year	\$ 1,776	\$ 5,600	\$ 840	\$ 4,760	\$ -	\$ -	\$ -	\$ 2	\$ 302	25%	\$1,400
65	CCB-5.6	Cherry Creek Stream Stabilization at Lincoln Avenue (Parker)	Conceptual design by UDFCD	Local stream stabilization (L = 2350 ft)	0.45	mi			100	lbs/mi	45	lbs/yr	Storm Flow	90%	40	lbs/year	\$ 1,447	\$ 3,290	\$ 494	\$ 2,797	\$ -	\$ -	\$ -	\$ 1	\$ 177	25%	\$823

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
TABLE 1 - SUMMARY OF POTENTIAL POLLUTANT REDUCTION FACILITIES
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Proj. Designation	Project Title	Status	Description	Design Basis				Projected Loads		Projected Treatment			Cost Estimate (1000\$)								Unit Cost (\$/pound)		Note				
				PRF Type	Quantity	Unit	Rate	Volume	Rate	Total	Source	Removal	lbs Removed	Capital	Land Acquisition	Water Augment ⁸	Capital Replace ⁹	O&M	Annual Cost @ 4%	CCBWQA Share (%)	CCBWQA Share (\$)	w/o cost sharing		w/cost sharing			
66	CCB-5.14C	Cherry Creek Stream Reclamation - Valley Country Club to Soccer Fields (Reaches 3 and 4)	Projects with UDFCD, SEMSWA, and Aurora. Phases started in 2010.	Local stream stabilization (L = 5167 ft on Cherry Creek)	0.98	mi			100	lbs/mi	98	lbs/yr	Storm Flow	90%	88	lbs/year	\$ 5,287	\$ 10,600	\$ 1,590	\$ 9,010	\$ -	\$ -	\$ -	\$ 2	\$ 570	25%	\$2,650
67	CCB-5.14D	Cherry Creek Stream Reclamation - Remaining Sections (not included in Reaches 3 and 4) from Valley Country Club to Soccer Fields	Projects with UDFCD, SEMSWA, and Aurora. Phases started in 2010.	Local stream stabilization (L = 3688 ft on Cherry Creek)	0.70	mi			100	lbs/mi	70	lbs/yr	Storm Flow	90%	63	lbs/year	\$ 2,980	\$ 5,163	\$ 774	\$ 4,389	\$ -	\$ -	\$ -	\$ 1	\$ 278	25%	\$1,291
68	CCB-5.16A	Cherry Creek Stream Reclamation - Reservoir to Lake View Drive (Reach 1 in Muller's 2022 Stream Assessment Report)	Project w/in CCSP	Local stream stabilization (L = 5400 ft.)	1.02	mi			100	lbs/mi	102.3	lbs/yr	Storm Flow	90%	92	lbs/year	\$ 6,842	\$ 11,846	\$ 1,777	\$ 10,069	\$ -	\$ -	\$ -	\$ 6	\$ 641	100%	\$11,846
69	CCB-5.17.2 (w/ 2023 additional funding of \$500k MHFD, \$300K Douglas, and \$409k CCBWQA)	Cherry Creek Stream Reclamation U/S Scott Road	Project requested by Douglas County and UDFCD in 2019	Local stream stabilization (L = 4300 ft)	0.81	mi			100	lbs/mi	81	lbs/yr	Storm Flow	90%	73	lbs/year	\$ 5,477	\$ 5,477	\$ 822	\$ 4,655	\$ -	\$ -	\$ -	\$ 2	\$ 295	24%	\$1,309
70	CCB-5.17.2 (w/ 2023 additional funding of \$500k MHFD, \$300K Douglas, \$0 CCBWQA)	Cherry Creek Stream Reclamation U/S Scott Road	Project requested by Douglas County and UDFCD in 2019	Local stream stabilization (L = 4300 ft)	0.81	mi			100	lbs/mi	81	lbs/yr	Storm Flow	90%	73	lbs/year	\$ 5,477	\$ 5,477	\$ 822	\$ 4,655	\$ -	\$ -	\$ -	\$ 2	\$ 295	16%	\$900
71	CCB-6.5	Piney Creek Reach 1 to 2 (SEMSWA)	Requested in 2020	2900 lf of stream reclamation	0.55	mi			100	lbs/mi	55	lbs/mi	Storm Flow	90%	49	lbs/year	\$ 2,350	\$ 4,060	\$ 609	\$ 3,451	\$ -	\$ -	\$ -	\$ 1	\$ 219	25%	\$1,015
72	CCB-6.6	Piney Creek Tower to Orchard (SEMSWA)	Requested in 2020	3800 lf of stream reclamation	0.72	mi			100	lbs/mi	72	lbs/mi	Storm Flow	90%	65	lbs/year	\$ 3,000	\$ 5,320	\$ 798	\$ 4,522	\$ -	\$ -	\$ -	\$ 1	\$ 286	25%	\$1,330
73	CCB-7.4	McMurdo Gulch Reclamation (Castle Rock) 22/23/24/25 Project	Design in 2022- 2023, Construction in 2024	Stream Reclamation (L = 6,550 lf)	1.24	mi			100	lbs/mi	124	lbs/yr	Storm Flow	90%	112	lbs/year	\$ 3,298	\$ 5,162	\$ 774	\$ 4,388	\$ -	\$ -	\$ -	\$ 2	\$ 279	25%	\$1,292
74	CCB-13.3.1A	Cottonwood Creek Cattail Harvesting from Reservoir to Peoria Street~	Pilot Project - Odd Years Harvest Left Bank	1.7 Acres of Cattail Harvesting	2.90	mi				lbs/mi	30	lbs/yr	Storm Flow	100%	59	lbs/year	\$ 60	\$ 90	\$ -	\$ 90	\$ -	\$ -	\$ -	\$ -	\$ 5	100%	\$90
75	CCB-13.3.1B	Cottonwood Creek Cattail Harvesting from Reservoir to Peoria Street~	Pilot Project - Even Years Harvest Right Bank	2.0 Acres of Cattail Harvesting	2.90	mi				lbs/mi	237	lbs/yr	Storm Flow	100%	60	lbs/year	\$ 60	\$ 90	\$ -	\$ 90	\$ -	\$ -	\$ -	\$ -	\$ 5	100%	\$90
76	CCB-13.5.3	Cottonwood Creek Tributary - Shooting Area Tributary (CCSP)	Requested in 2020	600 lf of stream reclamation	0.11	mi			100	lbs/mi	11	lbs/yr	Storm Flow	90%	10	lbs/year	\$ 300	\$ 720	\$ 108	\$ 612	\$ -	\$ -	\$ -	\$ 1	\$ 40	25%	\$180
77	CCB-13.5.4	Cottonwood Creek and Tributary C (IWSD)	Requested in 2020	2080 lf of stream reclamation	0.39	mi			100	lbs/mi	39	lbs/yr	Storm Flow	90%	35	lbs/year	\$ 1,664	\$ 2,496	\$ 374	\$ 2,122	\$ -	\$ -	\$ -	\$ 1	\$ 135	25%	\$624
78	CCB-16	Stream Corridor Preservation	No projects identified	Partner with others to purchase property or conservation easements along Cherry Creek													\$ 100	\$ 100	\$ -	\$ 100				\$ 5	100%	\$100	
79	CCB-17.2.1	Mountain and Lake Loop - 2021 Shoreline Maintenance	Identified during 2020 annual PRF observation	45 lf of bank stabilization	45	lf	0.1 cy/yr/ft		0.14	lbs/lf	6.3	lbs/yr	bank erosion	80%	5.04	lbs/yr	\$ 24	\$ 24	\$ -	\$ 24	\$ -	\$ -	\$ -	\$ 1	\$ 2	100%	\$24
80	CCB-17.5.1	East Shade Shelter Shoreline Stabilization Phase III	Identified during 2014 annual PRF inspection	400 lf of bank stabilization	400	lf	0.1 cy/yr/ft		0.14	lbs/lf	56.0	lbs/yr	bank erosion	80%	44.8	lbs/yr	\$ 906	\$ 975	\$ 184	\$ 791	\$ -	\$ -	\$ -	\$ 1	\$ 53	86%	\$842
81	CCB-17.7	Tower Loop Shoreline Stabilization Phase II	Identified during 2014 annual PRF inspection	700 lf of bank stabilization	700	lf	0.1 cy/yr/ft		0.14	lbs/lf	98.0	lbs/yr	bank erosion	80%	78.4	lbs/yr	\$ 1,076	\$ 1,035	\$ 155	\$ 880	\$ -	\$ -	\$ -	\$ 1	\$ 56	85%	\$880
82	CCB-21.1	Lone Tree Creek in CCSP downstream of Pond (CCBWQA Only)	Identified in 2014. Request from Arapahoe County Open Space.	500 lf of stream reclamation from CCSP Boundary to Cottonwood Creek	0.09	mi			100	lbs/mi	9	lbs/yr	Storm Flow	90%	9	lbs/yr	\$ 340	\$ 600	\$ 90	\$ 510	\$ -	\$ -	\$ -	\$ 1	\$ 33	100%	\$600

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				PRF Type	Quantity	Unit	Rate	Volume	Rate	Total	Source	Removal	lbs Removed	Capital	Land Acquisition	Water Augment ⁸	Capital Replace ⁹	O&M	Annual Cost @ 4%	CCBWQA Share (%)	CCBWQA Share (\$)	w/o cost sharing		w/cost sharing			
83	CCB-21.3 Lone Tree Creek in CCSP upstream of Pond (Centennial Trail Portion)	Request from Centennial for Participation in Stream Reclamation portion of Trail Project	710 lf of stream reclamation between CCSP Boundary and Windmill Creek Loop Trail	0.13	mi			100	lbs/mi	13	lbs/yr	Storm Flow	90%	12	lbs/yr	\$ 448	\$ 448	\$ -	\$ 448	\$ -	\$ -	\$ -	\$ -	\$ 1	\$ 25	25%	\$112
84	CCB-22.1 Happy Canyon Creek at Jordan Road (SEMSWA)	Requested in 2020	2,500 lf of stream reclamation, project extended another 2000 feet in 2022	0.85	mi			100	lbs/mi	85	lbs/yr	Storm Flow	90%	77	lbs/year	\$ 2,731	\$ 6,300	\$ 945	\$ 5,355	\$ -	\$ -	\$ -	\$ -	\$ 2	\$ 340	25%	\$1,575
85	CCB-23.1 (w/ Phase 2 Consturction Funding of \$1620k SEMSWA and \$778k CCBWQA)	Requested in 2020	2700 lf of stream reclamation (broken into 2 phases, see 23.2A and 23.2 B)	0.51	mi			100	lbs/mi	51	lbs/yr	Storm Flow	90%	46	lbs/year	\$ 4,960	\$ -	\$ 4,960	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1	\$ 267	16%	\$778
86	CCB-23.1 (w/ Phase 2 Consturction Funding of \$1291k SEMSWA and \$869k CCBWQA)	Requested in 2020	2700 lf of stream reclamation (broken into 2 phases, see 23.2A and 23.2 B)	0.51	mi			100	lbs/mi	51	lbs/yr	Storm Flow	90%	46	lbs/year	\$ 4,960	\$ -	\$ 4,960	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1	\$ 267	17.5%	\$869
88	Proj. Designation	Project Title	Description	Design Basis				Projected Loads		Projected Treatment			Cost Estimate (1000\$)								Unit Cost (\$/pound)						
89			PRF Type	Quantity	Unit	Rate	Volume	Rate	Total	Source	Removal	lbs Removed	Capital from 2023 to 2032 CIP	Capital update to 2023 \$	Land Acquisition	Water Augment ⁸	Capital Replace ⁹	O&M	Annual Cost @ 4%	CCBWQA Share (%)	CCBWQA Share (\$)	w/o cost sharing	w/cost sharing				
90	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14a)	(14b)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)			
91	CCB-5.16B	Cherry Creek Stream Reclamation - Lake View Drive to North Side of DOLA (Reach 2 in Muller's 2022 Stream Assessment Report)	Project w/in CCSP	Local stream stabilization (L=4400 ft.)	0.83	mi			100	lbs/mi	83.3	lbs/yr	Storm Flow	90%	75	lbs/year	\$ 5,612	\$ 7,920	\$ -	\$ -	\$ -	\$ 6	\$ 430	100%	\$5,612	\$ 5,738	\$ 5,738
92	CCB-5.16C	Cherry Creek Stream Reclamation - North Side of DOLA to CCSP Boundaries (Reaches 3 Muller's 2022 Stream Assessment Report)	Project w/in CCSP	Local stream stabilization (Cherry Creek Reach 3 L=6200 ft)	1.17	mi			100	lbs/mi	117.4	lbs/yr	Storm Flow	90%	106	lbs/year	\$ 10,054	\$ 11,160	\$ -	\$ -	\$ -	\$ 6	\$ 604	100%	\$10,054	\$ 5,715	\$ 5,715
93	CCB-8	Limestone Filter Enhancement	Specific project not identified	Construct limestone filter bed downstream of retention pond	1.0	sq mi	n/a	10.7 af/year/sq mile	427	lbs/sq mi	427	lbs/yr	Base and storm flow	20%	85	lbs/year/mi ²	\$ 943	\$ 943	\$ -	\$ 595	\$ 1	\$ 83	43%	\$405	\$ 977	\$ 420	
94	CCB-11	Advanced Water Treatment Plant	Conceptual design prepared	Construct 2 MGD AWT plant on Cottonwood Creek to treat Cherry Creek and Cottonwood Creek flows (0.21-mg/ influent, 0.03 mg/l disch)	3	cfs	2-MGD	2260	0.21	mg/l	1272	lbs/yr	Base flow and groundwater	90%	1145	lbs/year	\$ 4,593	\$ 4,593	unknown	unknown	\$ 69		100%	\$4,593	\$ -	\$ -	
95	CCB-17.4.1	East Boat Ramp Shoreline Stabilization Phase III	Identified during 2012 annual PRF inspection	400 lf of bank stabilization	400	lf	0.1 cy/yr/ft		0.14	lbs/lf	56.0	lbs/yr	bank erosion	80%	44.8	lbs/yr	\$ 350	\$ 350	\$ -	\$ -	\$ -	\$ 4	\$ 23	100%	\$350	\$ 508	\$ 508
96	CCB-17.6	West Shade Shelter Shoreline Stabilization PRF ¹⁴	Identified initially in 2006. UCD Student Project w/WPR in 2013	1,400 lf of bank stabilization	1400	lf	0.1 cy/yr/ft		0.14	lbs/lf	196.0	lbs/yr	bank erosion	80%	179	lbs/yr	\$ 704	\$ 704	\$ -	\$ -	\$ -	\$ 2	\$ 51	65%	\$458	\$ 285	\$ 185
97	CCB-17.8	Dixon Grove Shoreline Stabilization Phase II	Identified during 2019 annual PRF inspection	200 lf of bank stabilization	200	lf	0.1 cy/yr/ft		0.14	lbs/lf	28.0	lbs/yr	bank erosion	80%	22.4	lbs/yr	\$ 235	\$ 235	\$ -	\$ -	\$ -	\$ 1	\$ 14	100%	\$235	\$ 607	\$ 607
98	CCB-18	OWTS Sewer Service	No action to date	Provide Sewer Service for OWTS Areas				To Be Determined	To Be Determined				To Be Determined												100%	To Be Determined	
99	CCB-19	Non-point Pollutant Management	No action to date	Assist agricultural contributors to water quality impact				To Be Determined	To Be Determined				To Be Determined	\$ 100	\$ 100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5	100%	\$100		To Be Determined		

BASIS FOR ANALYSIS:
 (A) Unit cost of phosphorus removal based on annualized cost of completed project over 35 years at 4% interest rate. **CRF = 0.053577**
 (B) All projects identified provide for additional phosphorus immobilization beyond minimum requirements, unless noted otherwise.

REFERENCES
 1. Muller Eng 2003. *Feasibility Evaluation for Cherry Creek State Park Wetlands Project*
 2. Muller Eng 2003. *Feasibility Evaluation for Cottonwood Creek Stream Stabilization Project*
 3. AMEC 2005. *Draft Feasibility Report Cherry Creek Reservoir Destratification*
 4. AMEC 2006. *Recommendations for Prepurchase of Jamor Equipment for Cherry Creek Reservoir Destratification Project.*

2024 CIP NOTES:

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
TABLE 2 - SUMMARY OF RECOMMENDED POLLUTANT REDUCTION FACILITIES
2024 - 2033 BUDGET PROJECTIONS (1000\$)

Color Code: Please see comment for more information and mention while presenting.

Projects with potential funding moved from 2024 to 2023.

Haven't received input as of 9/26/23 from Partners on possible CIP schedule and cost changes

	A	B	C	D	E	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
9		October 6, 2023				Residual PRF Costs	Proposed 2024 Budget				Proposed 2025 Budget	Proposed 2026 Budget	Proposed 2027 Budget	Proposed 2028 Budget	Proposed 2029 Budget	Proposed 2030 Budget	Proposed 2031 Budget	Proposed 2032 Budget	Proposed 2033 Budget	2024-2033 Total
10	Project No.	Project Title	Total	Authority Portion	Authority Portion		Design	Capital	Land	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
11	Budget Category - General																			
12	Budget Category - Reservoir Projects																			
13	CCR-2	Reservoir Destratification System - Distribution Preliminary Design - Includes evaluation of Optimization of Distribution with WWE Expansion Alternative	\$ 2,140	\$ 2,140	100%	\$ 2,140	\$ 150	\$ -	\$ -	\$ 150	\$ 120	\$ -	\$ -	\$ -	\$ -	\$ 935	\$ 935	\$ -	\$ -	\$ 2,140
14	CCB-17.5.1	East Shade Shelter Shoreline Stabilization Phase III	\$ 975	\$ 842	86%	\$ 658	\$ -	\$ 658	\$ -	\$ 658	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 658
15	CCB-17.7	Tower Loop Shoreline Stabilization Phase II	\$ 1,035	\$ 1,035	100%	\$ 1,035	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 155	\$ 880	\$ 1,035
16	Budget Category - Stream Reclamation Projects																			
17	CCB-5.4	Cherry Creek Stream Reclamation at Main Street (Parker)	\$ 5,600	\$ 1,400	25%	\$ 1,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 700	\$ 700	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400
18	CCB-5.6	Cherry Creek Stream Stabilization at Lincoln Avenue (Parker)	\$ 3,290	\$ 823	25%	\$ 823	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 411	\$ 412	\$ -	\$ -	\$ 823
19	CCB-5.14C	Cherry Creek Stream Reclamation - Valley Country Club to Soccer Fields (Reaches 3 and 4)	\$ 10,600	\$ 2,650	25%	\$ 2,099	\$ -	\$ 300	\$ -	\$ 300	\$ 350	\$ 400	\$ 600	\$ 449	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,099
20	CCB-5.16A	Cherry Creek - Reservoir to Lake View Drive Alternatives Analysis	\$ 438	\$ 438	100%	\$ 181	\$ 181	\$ -	\$ -	\$ 181	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 181
21	CCB-5.16A	Cherry Creeks Reach 1 in CCSP	\$ 11,846	\$ -	0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 650	\$ 650	\$ 650	\$ 650	\$ 650	\$ 650	\$ 650	\$ 675	\$ 698	\$ 5,923
22	CCB-6.5	Piney Creek Reach 1 to 2 (SEMSWA)	\$ 4,060	\$ 1,015	25%	\$ 914	\$ 39	\$ -	\$ -	\$ 39	\$ 25	\$ 75	\$ 150	\$ 125	\$ 125	\$ 125	\$ 125	\$ 125	\$ -	\$ 914
23	CCB-6.6	Piney Creek Tower to Orchard (SEMSWA)	\$ 5,320	\$ 1,330	25%	\$ 1,330	\$ -	\$ 75	\$ -	\$ 75	\$ 150	\$ 235	\$ 250	\$ 250	\$ 250	\$ 120	\$ -	\$ -	\$ -	\$ 1,330
24	CCB-7.4	McMurdo Gulch Reclamation (Castle Rock)	\$ 5,162	\$ 1,292	25%	\$ 1,121	\$ -	\$ -	\$ 1,121	\$ 1,121	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,121
25	CCB-13.5.3	Cottonwood Creek Tributary - Shooting Area Tributary (CCSP)	\$ 720	\$ 180	25%	\$ 180	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 180	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 180
26	CCB-13.5.4	Cottonwood Creek and Tributary C (IWSD)	\$ 2,496	\$ 624	25%	\$ 624	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 624	\$ -	\$ -	\$ -	\$ 624
27	CCB-21.1	Lone Tree Creek in CCSP downstream of Pond (CCBWQA Only)	\$ 600	\$ 600	100%	\$ 600	\$ 120	\$ -	\$ -	\$ 120	\$ 480	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 600
28	CCB-21.3	Lone Tree Creek in CCSP upstream of Pond (Centennial Trail Portion)	\$ 448	\$ 112	25%	\$ 112	\$ -	\$ 112	\$ -	\$ 112	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 112
29	CCB-22.1	Happy Canyon Creek at Jordan Road (SEMSWA)	\$ 6,300	\$ 1,575	25%	\$ 1,394	\$ -	\$ 50	\$ -	\$ 50	\$ 75	\$ 75	\$ 171	\$ 170	\$ 170	\$ 170	\$ 170	\$ 170	\$ 173	\$ 1,394
30	CCB-23.1	Dove Creek U/S Pond D-1 to Chambers Rd (SEMSWA)	\$ 2,160	\$ 540	25%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31	Budget Category - PRF Water Quality/Wetland Ponds																			
32	Budget Category - PRF Preservation, Acquisition, Lease																			
33	CCB-16	PRF Preservation, Acquisition, Lease of Land or Water	\$ 1,000	\$ 1,000	100%	\$ 1,000	\$ -	\$ 100	\$ -	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 1,000
34		SUB-TOTALS								\$ 2,906	\$ 1,950	\$ 1,535	\$ 2,621	\$ 2,624	\$ 1,295	\$ 3,135	\$ 2,392	\$ 1,225	\$ 1,851	\$ 21,534

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
TABLE 2 - SUMMARY OF RECOMMENDED POLLUTANT REDUCTION FACILITIES
2024 - 2033 BUDGET PROJECTIONS (1000\$)

Color Code: Please see comment for more information and mention while presenting.
 Projects with potential funding moved from 2024 to 2023.
 Haven't received input as of 9/26/23 from Partners on possible CIP schedule and cost changes

	A	B	C	D	E	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1	CHERRY CREEK BASIN WATER QUALITY AUTHORITY																			
2	TABLE 2 - SUMMARY OF RECOMMENDED POLLUTANT REDUCTION FACILITIES																			
3	2024 - 2033 BUDGET PROJECTIONS (1000\$)																			
4																				
5	Color Code: Please see comment for more information and mention while presenting.																			
6	Projects with potential funding moved from 2024 to 2023.																			
7	Haven't received input as of 9/26/23 from Partners on possible CIP schedule and cost changes																			
8																				
9		October 6, 2023				Residual PRF Costs	Proposed 2024 Budget				Proposed 2025 Budget	Proposed 2026 Budget	Proposed 2027 Budget	Proposed 2028 Budget	Proposed 2029 Budget	Proposed 2030 Budget	Proposed 2031 Budget	Proposed 2032 Budget	Proposed 2033 Budget	2024-2033 Total
10	Project No.	Project Title	Total	Authority Portion	Authority Portion		Design	Capital	Land	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
35																				
36	OPERATIONS AND MAINTENANCE																			
37	Routine Category																			
38	OM-7	Reservoir Destratification	\$ 350	\$ 350	100%					\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 400
39	OM-14.1	PRF Weed Control	\$ 100	\$ 100	100%					\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	\$ 100
40	OM-14.2	PRF Reseeding at CCSP	\$ 50	\$ 27	100%					\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 50
41	OM-14.3	PRF Mowing	\$ 50	\$ 45	100%					\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5	\$ 50
42		SUB-TOTAL	\$ 550	\$ 522						\$ 60	\$ 60	\$ 60	\$ 60	\$ 60	\$ 60	\$ 60	\$ 60	\$ 60	\$ 60	\$ 600
43	Operations Category																			
44	O - 1	RDS Utilities	\$ 650	\$ 650	100%					\$ 65	\$ 65	\$ 65	\$ 65	\$ 65	\$ 65	\$ 65	\$ 65	\$ 65	\$ 65	\$ 650
45	O - 2	RDS Service Plan	\$ 155	\$ 155	100%					\$ 13	\$ 14	\$ 15	\$ 16	\$ 17	\$ 18	\$ 19	\$ 20	\$ 20	\$ 20	\$ 172
46	O - 3	PRF Emergency Repairs	\$ -	\$ -	100%					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	O - 4	Meteorological Station	\$ 36	\$ 36	100%					\$ 3	\$ 3	\$ 3	\$ 3	\$ 3	\$ 3	\$ 3	\$ 3	\$ 3	\$ 3	\$ 30
48		SUB-TOTAL	\$ 841	\$ 841						\$ 81	\$ 82	\$ 83	\$ 84	\$ 85	\$ 86	\$ 87	\$ 88	\$ 88	\$ 88	\$ 852
49	Restorative Category																			
50	OM -	Tree/Shrub Planting	\$ 18	\$ 18	100%					\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 20
51	OM -	Fence Repair	\$ 72	\$ 72	100%					\$ 8	\$ 8	\$ 8	\$ 8	\$ 8	\$ 8	\$ 8	\$ 8	\$ 8	\$ 8	\$ 80
52	OM -	Shoreline / Bank Restoration																		\$ -
53		Average Annual Cost								\$ 195	\$ 195	\$ 195	\$ 195	\$ 195	\$ 195	\$ 195	\$ 195	\$ 195	\$ 195	\$ 1,950
54		Shop Creek Concrete Repairs	\$ 10	\$ 10						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
55		Mountain/Lake Loop Shoreline	\$ 24	\$ 24	100%					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
56	OM -	Wetland Harvesting	\$ 900	\$ 900	100%					\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 900
57		SUB-TOTAL	\$ 1,024	\$ 1,024						\$ 295	\$ 295	\$ 295	\$ 295	\$ 295	\$ 295	\$ 295	\$ 295	\$ 295	\$ 295	\$ 2,950
58	Rehabilitation Category																			
59	OM -				100%					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
60		SUB-TOTAL	\$ -	\$ -						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
61																				
62		SUB-TOTAL O&M								\$ 436	\$ 437	\$ 438	\$ 439	\$ 440	\$ 441	\$ 442	\$ 443	\$ 443	\$ 443	\$ 4,402
63		GRAND TOTAL								\$ 3,342	\$ 2,387	\$ 1,973	\$ 3,060	\$ 3,064	\$ 1,736	\$ 3,577	\$ 2,835	\$ 1,668	\$ 2,294	\$ 25,936

CHERRY CREEK BASIN WATER QUALITY AUTHORITY																																
TABLE 3 - SUMMARY OF POTENTIAL POLLUTANT REDUCTION FACILITIES																																
REVISIONS FOR 2024 - 2033 CIP																																
<p>Date: October 6, 2023</p> <p>Color Code: Blue: Project Completed</p>																																
Projects with best total project cost and stream length information, on similar maintenance cost baseline, and adjusted to September 2023 cost basis																																
Proj. Designation	Project Title	Status	Description	Design Basis				Projected Loads		Projected Treatment			Cost Estimate (1000\$)						WQ Unit Cost (\$/pound)		Adjusted to 2023 \$ (1000\$)				2023 WQ Unit Cost (\$/pound)		Note					
				PRF Type	Quantity	Unit	Rate	Volume	Rate	Total	Source	Removal	lbs Removed	Capital	Land Acquisition	Water Augment ⁸	Capital Replace ⁹	O&M	Annual Cost @ 4%	CCBWQA Share (%)	CCBWQA Share (\$)	w/o cost sharing	w/cost sharing	Bid Date/Construction Date	ENR Factor	Construction Cost		Cost per mile	w/o cost sharing	w/cost sharing		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14a)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)						(24)				
CCB-5.7*	Cherry Creek Stream Stabilization at Eco-Park (SEMSWA)	IGA w/SEMSWA for design in 2010 and construction in 2011/2012	Local stream stabilization (L = 4850 ft)	0.92	mi			100	lbs/mi	92	lbs/yr	Storm Flow	90%	83	lbs/year	\$ 4,756	\$ -	\$ -	\$ -	\$ 2	\$ 257	19%	\$905	\$ 3,106	\$ 591	August 2012	1.58	\$ 7,531	\$ 8,199	\$ 4,919	\$ 936	1, 2
CCB-5.11*	Cherry Creek Stream Stabilization at Norton Farms (Parker)	Conceptual design by UDFCD identified priority 3	Local stream stabilization (L = 2500 ft)	0.47	mi			100	lbs/mi	47	lbs/yr	Storm Flow	90%	43	lbs/year	\$ 1,103	\$ -	\$ -	\$ -	\$ 1	\$ 60	23%	\$255	\$ 1,410	\$ 326	January 2016	1.48	\$ 1,634	\$ 3,452	\$ 2,090	\$ 483	1, 2
CCB-5.15*	Cherry Creek Stream Reclamation at Country Meadows (Hess Rd)	Project by Town of Parker and Douglas County	Local stream stabilization (L = 4200 ft)	0.80	mi			100	lbs/mi	80	lbs/yr	Storm Flow	90%	72	lbs/year	\$ 2,788	\$ -	\$ -	\$ -	\$ 2	\$ 151	25%	\$695	\$ 2,114	\$ 527	October 2014	1.51	\$ 4,222	\$ 5,307	\$ 3,202	\$ 798	1, 2
CCB-5.17.1A*	Cherry Creek Stream Reclamation at KOA	Preliminary design completed 2019, Extension Requested by UDFCD and Parker in 2019	Local stream stabilization (L=1400 ft original, L=2000 ft with 600 ft extension)	0.38	mi			100	lbs/mi	38	lbs/yr	Storm Flow	90%	34	lbs/year	\$ 1,806	\$ -	\$ -	\$ -	\$ 1	\$ 98	18%	\$333	\$ 2,868	\$ 529	July 2020	1.32	\$ 2,378	\$ 6,278	\$ 3,776	\$ 696	1, 2
CCB-6.4A*	Piney Creek Stream Reclamation - Reach 7	Request from UDFCD in 2014	Local stream stabilization (L = 2,340 ft)	0.44	mi			100	lbs/mi	44	lbs/yr	Storm Flow	90%	40	lbs/year	\$ 3,765	\$ -	\$ -	\$ -	\$ 1	\$ 203	14%	\$512	\$ 5,082	\$ 691	December 2016	1.44	\$ 5,422	\$ 12,234	\$ 7,319	\$ 995	1, 2
CCB-6.4B.1*	Piney Creek Stream Reclamation - Reach 6 upstream of Caley	Request from UDFCD in 2014	Local stream stabilization (L = 1,600 ft)	0.30	mi			100	lbs/mi	30	lbs/yr	Storm Flow	90%	27	lbs/year	\$ 2,896	\$ -	\$ -	\$ -	\$ 1	\$ 156	14%	\$394	\$ 5,726	\$ 779	November 2016	1.45	\$ 4,194	\$ 13,840	\$ 8,292	\$ 1,128	1, 2
CCB-6.4B.2*	Piney Creek Stream Reclamation - Reach 6 Phase 2	Request from UDFCD in 2014	Local stream stabilization (L = 2,580 ft)	0.49	mi			100	lbs/mi	49	lbs/yr	Storm Flow	90%	44	lbs/year	\$ 2,659	\$ -	\$ -	\$ -	\$ 1	\$ 143	14%	\$361	\$ 3,262	\$ 443	November 2017	1.40	\$ 3,712	\$ 7,597	\$ 4,554	\$ 618	1, 2
CCB-7.2*	McMurdo Gulch Reclamation (Castle Rock) 19/20 Project	Design in 2019, Construction in 2020	Stream Reclamation (L = 2,000 ft)	0.38	mi			100	lbs/mi	38	lbs/yr	Storm Flow	90%	34	lbs/year	\$ 1,156	\$ -	\$ -	\$ -	\$ 1	\$ 63	25%	\$289	\$ 1,846	\$ 462	February 2020	1.33	\$ 1,532	\$ 4,045	\$ 2,447	\$ 612	1, 2
CCB-7.3*	McMurdo Gulch Reclamation (Castle Rock) 20/21/22 Project	Design in 2020, Construction 2021	Stream Reclamation (L = 3,700 ft)	0.70	mi			100	lbs/mi	70	lbs/yr	Storm Flow	90%	63	lbs/year	\$ 1,940	\$ -	\$ -	\$ -	\$ 1	\$ 105	24%	\$466	\$ 1,664	\$ 400	November 2021	1.14	\$ 2,204	\$ 3,145	\$ 1,890	\$ 454	1, 2
CCB-22.2*	Happy Canyon Creek Upstream of I-25 (MHFD)	Requested in 2020	3000 lf of stream reclamation	0.57	mi			100	lbs/mi	57	lbs/yr	Storm Flow	90%	51	lbs/year	\$ 4,021	\$ -	\$ -	\$ -	\$ 1	\$ 216	9%	\$362	\$ 4,232	\$ 381	May 2023	1.02	\$ 4,114	\$ 7,240	\$ 4,330	\$ 390	1, 2
																					Calculated partner project historical limit of 25%						Calculated partner project historical limit of 25%					
																					\$ 1,410	\$ 353	\$ 1,532	\$ 3,145	\$ 1,890	\$ 472						
																					\$ 5,726	\$ 1,431	\$ 7,531	\$ 13,840	\$ 8,292	\$ 2,073						
																					\$ 2,975	\$ 744	\$ 3,498	\$ 6,771	\$ 4,064	\$ 1,016						
																					\$ 2,987	\$ 747	\$ 3,913	\$ 6,759	\$ 4,053	\$ 1,013						
																					\$ 1,477	\$ 369	\$ 1,864	\$ 3,581	\$ 2,137	\$ 534						
BASIS FOR ANALYSIS:																																
(A) Unit cost of phosphorus removal based on annualized cost of completed project over 35 years at 4% interest rate. CRF = 0.053577																																
(B) All projects identified provide for additional phosphorus immobilization beyond minimum requirements, unless noted otherwise.																																
2023 CIP NOTES:																																
1. Corrected project information as noted in comments.																																
2. Updated O&M Cost to \$2k per mile with a minimum of \$1k for projects outside of CCSP																																
3. Updated O&M Cost to \$4k per mile with a minimum of \$2k for projects inside of CCSP, which is higher due to impacts from park users.																																

Figure 1 - Stream Reclamation outside of CCSP

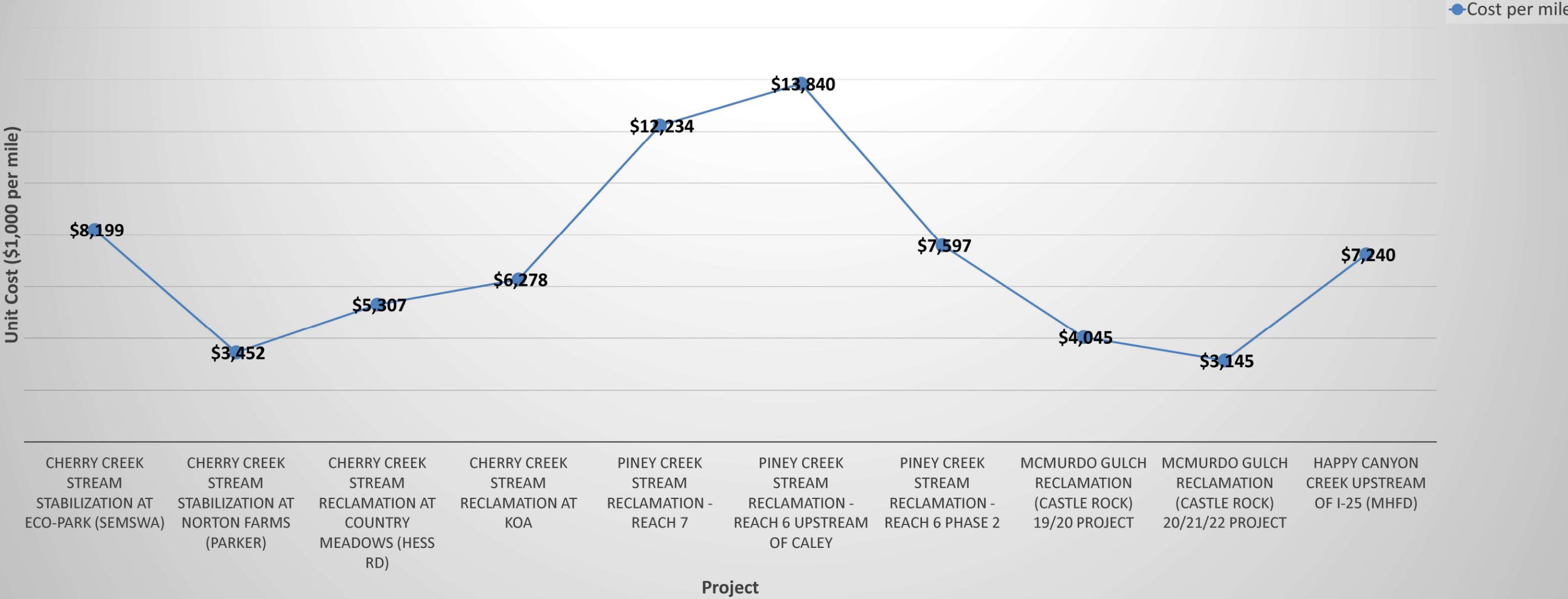
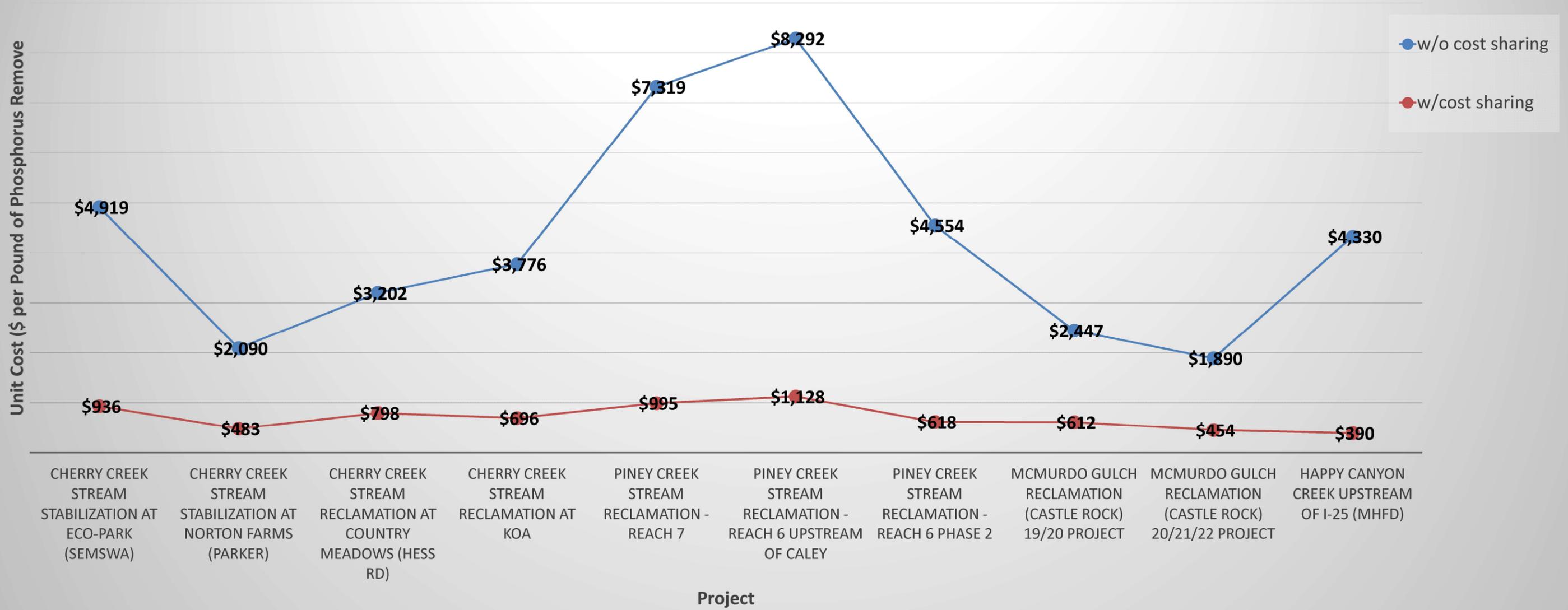


Figure 2 - Stream Reclamation outside of CCSP



CHERRY CREEK BASIN WATER QUALITY AUTHORITY CAPITAL PROGRAM BUDGET SPREADSHEET USER INFORMATION

This workbook contains the budget spreadsheets used annually to update the Authority 5-year projections and the annual budget. Because worksheets are connected (i.e.: some cells in each worksheet are referenced to cells in other worksheets), the user needs to be sure to enter information in the correct cell. Therefore the cells used for input are colored "purple". Where formulas, equations, or cell references are shown in the cell, information should NOT be adjusted in the worksheet where formulas, equations, or cell references are shown, except for corrections. In the PRFSummary-Rev spreadsheet, "green" is used for projects in progress and "blue" is used for completed projects.

Because not all information available for each potential project is the same, information in the spreadsheets may be input at that cell, reference another cell, or use an equation. Thus, there are some differences in how calculations are made, such as between the capital and the O&M portions of the spreadsheet. The fact that different procedures are used for different projects, spreadsheet updates need to be checked carefully.

In general, the worksheets are manually updated as follows:

PRFSUMMARY Worksheet

1. This worksheet is used to track the status of the project and to add new PRF projects to the list. The cells with "purple" values are the primary cells where information is updated annually. Note that when referencing cells, the color coding of the referenced cell is NOT transferred.
2. Some cells in column "Q", under "*Cost Estimate/Capital*" references cells in the "*StreamStable*" worksheet for costs information, which are shown in "black". As information on these various projects becomes available, the cost information can be input directly into the cell, eliminating the need for the reference.

2013 BUDGET-5YR Worksheet

1. This worksheet is used to prepare the 5-year CIP projections and is the worksheet generally referred to during the year after all the PRF's are identified.
2. Some information in this worksheet is references the "*PRFSummary*" worksheet. Note that when referencing cells, the color coding of the referenced cell is NOT transferred.
3. In this worksheet, several columns are "hidden" to keep the worksheet to a reasonable size such that for the last 4-years of the projection, only the summary column (i.e.: "*Proposed 20XX Budget*") is shown. Also, completed projects rows can be "hidden" for presentation purposes. However, if there are values in hidden cells, Excel will include that value in any totals. This is readily checked by highlighting the cells shown, which will create a total and comparing the total to the total value shown.
4. In this worksheet, rows in which projects are not included in the 5-year CIP or have been completed are "hidden" and noted by "blue" text/numbers. Costs projections have been set to zero to avoid erroneous cost summaries since "hidden" cells are still included in column/row totals by Excel. If a project is reinstated, then need to be sure cells are properly designated.

2013 BUDGET -5YR Worksheet - Column Description

"Project No.". This is a unique project identifier for tracking purposes and are listed in numerical order in the "PRF Summary" worksheet. The primary number (i.e.: "5" in the CCB-5.1 designation) represents a major stream segment or unique type of project (i.e.: "1" refers to the aeration system, "5" refers to Cherry Creek, "6" to Piney Creek, "7" to McMurdo Gulch, etc.)

"Project Title". This is the project name referenced to a cell in the "PRF Summary" worksheet.

"Current Project Budget".

"Capital". The sum of the design, construction, and construction oversight costs.

"Total". The sum of Capital, Land Acquisition, Water Augmentation, Capital Replacement, and O&M.

Land Acquisition. Since the Authority's projects which have no partners is on land owned by the USACE, there have not been land acquisition costs. When the Authority partners with others outside the USACE property, land acquisition costs are normally included in the "capital costs" prepared by others.

Water Augmentation. So far the Authority has not been required to provide augmentation water rights for the projects because we've \ successfully argued with the SEO that we are simply "replacing" the riparian vegetation lost as the result of channel erosion. This may change in the future.

Capital Replacement. The only Authority project where this cost has been considered replacement of the compressor or components of the aeration system.

O&M. The present worth of annual operations and maintenance costs.

"Authority Portion". These two columns are the allocation of project costs in "\$" and "%".

"Residual PRF Costs". Whereas the "Current Project Budget" tracks all the project costs, the "Residual PRF Costs" shows the project costs that were not allocated in previous budget years.

"Proposed 20xx Budget". This section summarizes the "Design", "Capital", and "Total" project costs for that year. Note that "Design" costs are extracted from "Capital" costs for more precise budget tracking purposes.

STREAMSTABLE Worksheet

1. This worksheet was used to estimate stream stabilizations costs based on the UDFCD master plan for Cherry Creek. Some cost values are referenced by the "*PRFSummary-Rev*" worksheet.

O&M List Worksheet

1. This work sheet tracks the various O&M projects and assigns them an identifier for tracking purposes.

STREAMRECL UNIT COSTS Worksheet

1. This worksheet provides a way to track unit costs per pound of phosphorus.

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
ANNUAL BUDGET
FOR THE YEAR ENDING DECEMBER 31, 2024**

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
SUMMARY
2024 BUDGET
WITH 2022 ACTUAL AND 2023 ESTIMATED
For the Years Ended and Ending December 31,**

10/13/23

	ACTUAL 2022	BUDGET 2023	ACTUAL 6/30/2023	ESTIMATED 2023	BUDGET 2024
BEGINNING FUND BALANCES	\$ 5,758,590	\$ 4,635,823	\$ 5,814,599	\$ 5,814,599	\$ 5,852,704
REVENUES					
Property taxes	2,644,574	2,784,685	2,723,978	2,784,685	2,846,479
Specific ownership taxes	210,405	215,204	114,391	215,204	222,803
Recreation Fees	193,937	300,000	123,383	209,000	213,000
Building Permit Fees	268,283	250,000	62,925	230,000	234,000
Wastewater Fees	119,734	111,000	80,264	161,000	164,000
Interest income	118,845	76,000	155,188	340,300	266,800
Other revenue	5,520	5,000	-	50	9,500
Total revenues	<u>3,561,298</u>	<u>3,741,889</u>	<u>3,260,129</u>	<u>3,940,239</u>	<u>3,956,582</u>
TRANSFERS IN	<u>2,132,922</u>	<u>2,737,333</u>	<u>1,955,269</u>	<u>2,362,463</u>	<u>2,869,269</u>
Total funds available	<u>11,452,810</u>	<u>11,115,045</u>	<u>11,029,997</u>	<u>12,117,301</u>	<u>12,678,554</u>
EXPENDITURES					
General Fund	932,337	1,209,300	470,044	1,010,507	1,212,597
Special Revenue Fund	2,351,559	3,872,400	953,888	2,683,262	3,856,900
Enterprise Fund	221,393	391,000	63,628	208,365	258,800
Total expenditures	<u>3,505,289</u>	<u>5,472,700</u>	<u>1,487,560</u>	<u>3,902,134</u>	<u>5,328,297</u>
TRANSFERS OUT	<u>2,132,922</u>	<u>2,737,333</u>	<u>1,955,269</u>	<u>2,362,463</u>	<u>2,869,269</u>
Total expenditures and transfers out requiring appropriation	<u>5,638,211</u>	<u>8,210,033</u>	<u>3,442,829</u>	<u>6,264,597</u>	<u>8,197,566</u>
ENDING FUND BALANCES	<u>\$ 5,814,599</u>	<u>\$ 2,905,012</u>	<u>\$ 7,587,168</u>	<u>\$ 5,852,704</u>	<u>\$ 4,480,988</u>
EMERGENCY RESERVE	\$ 88,600	\$ 91,800	\$ 88,900	\$ 98,300	\$ 98,200
RESERVOIR DEST. SERV PLAN RESERVE	70,393	43,372	60,574	43,993	16,593
FACILITIES MAINTENANCE RESERVE	100,000	100,000	100,000	100,000	100,000
CAPITAL RESERVE	750,000	750,000	750,000	750,000	750,000
TOTAL RESERVE	<u>\$ 1,008,993</u>	<u>\$ 985,172</u>	<u>\$ 999,474</u>	<u>\$ 992,293</u>	<u>\$ 964,793</u>

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
PROPERTY TAX SUMMARY INFORMATION
2024 BUDGET
WITH 2022 ACTUAL AND 2023 ESTIMATED
For the Years Ended and Ending December 31,**

10/13/23

	ACTUAL 2022	BUDGET 2023	ACTUAL 6/30/2023	ESTIMATED 2023	BUDGET 2024
ASSESSED VALUATION - ARAPAHOE					
Residential	\$ 1,199,207,306	\$ 1,037,127,617	\$ 1,037,127,617	\$ 1,037,127,617	\$ 1,411,730,051
Residential - Multi Family	-	136,788,751	136,788,751	136,788,751	158,503,470
Commercial	1,001,435,625	999,003,626	999,003,626	999,003,626	1,274,805,629
Industrial	6,461,200	6,461,200	6,461,200	6,461,200	6,741,198
Agricultural	365,898	359,723	359,723	359,723	74,828
Other Ag	-	-	-	-	571,358
Natural Resources	-	-	-	-	13,089
State assessed	2,529,200	3,026,620	3,026,620	3,026,620	3,003,980
Vacant land	37,768,626	34,036,588	34,036,588	34,036,588	40,713,550
Personal property	151,299,748	144,405,973	144,405,973	144,405,973	156,571,302
Other	13,587	13,588	13,588	13,588	-
Certified Assessed Value	\$ 2,399,081,190	\$ 2,361,223,686	\$ 2,361,223,686	\$ 2,361,223,686	\$ 3,052,728,455
MILL LEVY					
General	0.500	0.500	0.500	0.500	0.500
Temporary Mill Levy Reduction	(0.021)	0.000	0.000	0.000	(0.108)
Total mill levy	0.479	0.500	0.500	0.500	0.392
PROPERTY TAXES					
General	\$ 1,199,541	\$ 1,180,612	\$ 1,180,612	\$ 1,180,612	\$ 1,526,364
Temporary Mill Levy Reduction	(50,381)	-	-	-	(329,695)
Levied property taxes	1,149,160	1,180,612	1,180,612	1,180,612	1,196,669
Adjustments to actual/rounding	-	-	(19,827)	-	-
Refunds and abatements	(13,832)	-	1,960	-	-
Budgeted property taxes	\$ 1,135,328	\$ 1,180,612	\$ 1,162,745	\$ 1,180,612	\$ 1,196,669
ASSESSED VALUATION - DOUGLAS					
Residential	\$ 2,039,108,800	\$ 2,075,018,450	\$ 2,075,018,450	\$ 2,075,018,450	\$ 2,708,465,000
Residential - Multi Family	-	-	-	-	173,462,960
Commercial	600,191,990	618,323,350	618,323,350	618,323,350	700,540,300
Industrial	163,237,070	169,097,570	169,097,570	169,097,570	214,950,680
Agricultural	11,494,050	10,800,380	10,800,380	10,800,380	10,972,300
Other Ag	-	-	-	-	2,634,300
Natural Resources	-	-	-	-	87,900
State assessed	3,260,900	4,954,100	4,954,100	4,954,100	4,983,700
Vacant land	192,875,070	175,740,950	175,740,950	175,740,950	216,755,120
Personal property	200,763,990	210,085,220	210,085,220	210,085,220	247,236,320
Renewable PP	-	-	-	-	24,750
Other	160,790	166,030	166,030	166,030	-
	3,211,092,660	3,264,186,050	3,264,186,050	3,264,186,050	4,280,113,330
Adjustments	(55,922,571)	(56,039,622)	(56,039,622)	(56,039,622)	(71,412,480)
Certified Assessed Value	\$ 3,155,170,089	\$ 3,208,146,428	\$ 3,208,146,428	\$ 3,208,146,428	\$ 4,208,700,850
MILL LEVY					
General	0.500	0.500	0.500	0.500	0.500
Temporary Mill Levy Reduction	(0.021)	0.000	0.000	0.000	(0.108)
Total mill levy	0.479	0.500	0.500	0.500	0.392
PROPERTY TAXES					
General	\$ 1,577,635	\$ 1,604,073	\$ 1,604,073	\$ 1,604,073	\$ 2,104,350
Temporary Mill Levy Reduction	(66,261)	-	-	-	(454,540)
Levied property taxes	1,511,374	1,604,073	1,604,073	1,604,073	1,649,810
Adjustments to actual/rounding	-	-	(15,136)	-	-
Refunds and abatements	(2,128)	-	(4,538)	-	-
Budgeted property taxes	\$ 1,509,246	\$ 1,604,073	\$ 1,584,399	\$ 1,604,073	\$ 1,649,810
BUDGETED PROPERTY TAXES					
General	\$ 2,644,574	\$ 2,784,685	\$ 2,747,144	\$ 2,784,685	\$ 2,846,479
	\$ 2,644,574	\$ 2,784,685	\$ 2,747,144	\$ 2,784,685	\$ 2,846,479

No assurance provided. See summary of significant assumptions.

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
GENERAL FUND
2024 BUDGET
WITH 2022 ACTUAL AND 2023 ESTIMATED
For the Years Ended and Ending December 31,**

10/13/23

	ACTUAL 2022	BUDGET 2023	ACTUAL 6/30/2023	ESTIMATED 2023	BUDGET 2024
BEGINNING FUND BALANCES	\$ 1,417,208	\$ 1,566,706	\$ 1,665,524	\$ 1,665,524	\$ 1,964,993
REVENUES					
Property taxes	2,644,574	2,784,685	2,723,978	2,784,685	2,846,479
Specific ownership taxes	210,405	215,204	114,391	215,204	222,803
Interest income	96,626	60,000	123,254	275,000	200,000
Other revenue	27	-	-	50	1,500
Total revenues	<u>2,951,632</u>	<u>3,059,889</u>	<u>2,961,623</u>	<u>3,274,939</u>	<u>3,270,782</u>
TRANSFERS IN					
Total funds available	<u>4,368,840</u>	<u>4,626,595</u>	<u>4,627,147</u>	<u>4,940,463</u>	<u>5,235,774</u>
EXPENDITURES					
General and administrative					
Accounting	55,161	70,000	29,263	65,000	70,000
Administrative Assistant	57,435	86,300	29,100	69,000	86,500
Auditing	7,200	7,500	8,000	8,000	8,000
County Treasurer's fee	39,694	39,900	40,896	41,770	42,697
CC Stewardship Partners	31,000	35,000	14,000	35,000	35,000
Dues and membership	1,238	2,000	1,238	1,500	2,000
Information & Education Coordination	2,550	-	-	-	12,000
Insurance	6,863	10,000	6,037	6,037	6,500
Legal	125,217	100,000	53,140	110,000	115,000
Management/Administration	-	69,000	37,245	69,000	68,700
Office/Miscellaneous Expense	9,451	7,400	7,259	9,400	8,000
TAC Coordination	23,410	20,800	8,279	20,800	20,800
WQCC regulation hearings	76,501	228,000	44,266	161,000	145,000
Website	8,643	10,000	200	10,000	3,000
	<u>444,363</u>	<u>685,900</u>	<u>278,923</u>	<u>606,507</u>	<u>623,197</u>
Watershed Management					
Annual Report	25,689	32,000	37,249	40,000	34,000
Data Management	46,659	45,000	22,609	45,000	50,000
General Watershed Management	139,841	125,000	23,812	50,000	188,000
Site Application Review	4,032	6,400	771	2,000	6,400
	<u>216,221</u>	<u>208,400</u>	<u>84,441</u>	<u>137,000</u>	<u>278,400</u>
Monitoring and Reporting					
General Technical Support	56,091	55,000	28,641	56,000	40,000
Monitoring - Reservoir	75,704	36,000	15,493	31,000	40,000
Monitoring - Watershed	115,340	48,000	29,193	60,000	53,000
Monitoring - Laboratory	-	120,000	33,353	100,000	120,000
WQ Data Reporting	24,618	56,000	-	20,000	58,000
	<u>271,753</u>	<u>315,000</u>	<u>106,680</u>	<u>267,000</u>	<u>311,000</u>
Total expenditures	<u>932,337</u>	<u>1,209,300</u>	<u>470,044</u>	<u>1,010,507</u>	<u>1,212,597</u>
TRANSFERS OUT					
Transfers to Pollution Abatement Fund	1,770,979	1,835,933	1,776,974	1,835,933	1,962,469
Supplemental Transfers	-	500,000	-	129,030	500,000
	<u>1,770,979</u>	<u>2,335,933</u>	<u>1,776,974</u>	<u>1,964,963</u>	<u>2,462,469</u>
Total expenditures and transfers out requiring appropriation	<u>2,703,316</u>	<u>3,545,233</u>	<u>2,247,018</u>	<u>2,975,470</u>	<u>3,675,066</u>
ENDING FUND BALANCES	<u>\$ 1,665,524</u>	<u>\$ 1,081,362</u>	<u>\$ 2,380,129</u>	<u>\$ 1,964,993</u>	<u>\$ 1,560,708</u>
EMERGENCY RESERVE	\$ 88,600	\$ 91,800	\$ 88,900	\$ 98,300	\$ 98,200
TOTAL RESERVE	<u>\$ 88,600</u>	<u>\$ 91,800</u>	<u>\$ 88,900</u>	<u>\$ 98,300</u>	<u>\$ 98,200</u>

No assurance provided. See summary of significant assumptions.

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
POLUTION ABATEMENT FUND
2024 BUDGET
WITH 2022 ACTUAL AND 2023 ESTIMATED
For the Years Ended and Ending December 31,**

10/13/23

	ACTUAL 2022	BUDGET 2023	ACTUAL 6/30/2023	ESTIMATED 2023	BUDGET 2024
BEGINNING FUND BALANCES	\$ 2,441,170	\$ 1,853,205	\$ 2,226,105	\$ 2,226,105	\$ 1,908,106
REVENUES					
Interest income	934	8,000	1,346	2,800	2,800
Other revenue	2,638	5,000	-	-	5,000
Total revenues	<u>3,572</u>	<u>13,000</u>	<u>1,346</u>	<u>2,800</u>	<u>7,800</u>
TRANSFERS IN					
Transfers from General Fund	1,770,979	1,835,933	1,776,974	1,835,933	1,962,469
Transfers from Enterprise Fund	309,595	401,400	178,295	397,500	406,800
Supplemental Transfers from other funds	52,348	500,000	-	129,030	500,000
Total Transfers In	<u>2,132,922</u>	<u>2,737,333</u>	<u>1,955,269</u>	<u>2,362,463</u>	<u>2,869,269</u>
Total funds available	<u>4,577,664</u>	<u>4,603,538</u>	<u>4,182,720</u>	<u>4,591,368</u>	<u>4,785,175</u>
EXPENDITURES					
General and administrative					
Management/Administration	434,311	396,100	173,195	358,100	449,400
PAPS - Undesignated	5,356	-	-	-	-
Repairs and maintenance	-	-	2,434	10,000	-
Contingency	-	10,000	-	-	10,000
	<u>439,667</u>	<u>406,100</u>	<u>175,629</u>	<u>368,100</u>	<u>459,400</u>
Pollution Reduction Facilities - O&M					
PRF Routine	21,755	10,000	-	10,000	10,000
PRF Repairs and Maintenance	2,972	111,200	-	111,200	73,600
PRF Restoration	154,368	40,000	-	35,000	10,000
PRF Reservoir Destratification Service Plan	10,379	26,400	9,819	26,400	27,400
Meteorological Station Service	-	3,000	-	3,000	3,000
Weed Control	-	10,000	-	10,000	22,000
Wetlands Harvesting	-	108,000	1,075	108,000	108,000
Utilities - Reservoir Destratification	63,586	65,000	15,533	65,000	71,500
Contingency	-	25,000	-	-	25,000
	<u>253,060</u>	<u>398,600</u>	<u>26,427</u>	<u>368,600</u>	<u>350,500</u>
Reservoir Projects					
RDS Rehabilitation	13,262	47,700	1,470	14,700	48,000
Shoreline Stabilization					
RSS East Shade Shelter	76,989	599,000	13,946	99,000	693,000
Contingency	-	50,000	-	-	50,000
	<u>90,251</u>	<u>696,700</u>	<u>15,416</u>	<u>113,700</u>	<u>791,000</u>
Stream Reclamation Projects					
SR - CC Arapahoe (R 3-4)	170,000	605,000	-	300,000	300,000
SR - CC 12-Mile Park	352,452	-	18,862	18,862	-
SR - CC Dransfeldt Extension	170,000	170,000	570,000	570,000	-
SR - Dove Creek - Otero to Chambers	75,000	138,000	138,000	138,000	-
SR - Happy Canyon - Jordan to Broncos Pk	68,000	88,000	-	88,000	50,000
SR - McMurdo Gulch	170,129	907,000	-	-	869,000
SR - Piney Creek (Reach 1-2)	38,000	63,000	-	63,000	39,000
SR - Reservoir to LV Road	-	200,000	9,554	115,000	341,000
SR - Preservation Acquisition Lease	-	100,000	-	-	100,000
SR - CC Scott Road	275,000	-	-	-	-
SR - Happy Canyon - I-25 Upstream	250,000	-	-	-	-
SR - Lone Tree Creek	-	-	-	-	112,000
SR - Lone Tree Creek (downstream pond)	-	-	-	-	120,000
SR - Dove Creek - Pond D1 to Otero	-	-	-	540,000	-
SR - Piney Creek (Reach 4-5)	-	-	-	-	75,000
RDS Distribution Analysis	-	-	-	-	150,000
Contingency	-	100,000	-	-	100,000
	<u>1,568,581</u>	<u>2,371,000</u>	<u>736,416</u>	<u>1,832,862</u>	<u>2,256,000</u>
Total expenditures	<u>2,351,559</u>	<u>3,872,400</u>	<u>953,888</u>	<u>2,683,262</u>	<u>3,856,900</u>
Total expenditures and transfers out requiring appropriation	<u>2,351,559</u>	<u>3,872,400</u>	<u>953,888</u>	<u>2,683,262</u>	<u>3,856,900</u>
ENDING FUND BALANCES	<u>\$ 2,226,105</u>	<u>\$ 731,138</u>	<u>\$ 3,228,832</u>	<u>\$ 1,908,106</u>	<u>\$ 928,275</u>
RESERVOIR DEST. SERV PLAN RESERVE	<u>\$ 70,393</u>	<u>\$ 43,372</u>	<u>\$ 60,574</u>	<u>\$ 43,993</u>	<u>\$ 16,593</u>
TOTAL RESERVE	<u>\$ 70,393</u>	<u>\$ 43,372</u>	<u>\$ 60,574</u>	<u>\$ 43,993</u>	<u>\$ 16,593</u>

No assurance provided. See summary of significant assumptions.

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
ENTERPRISE FUND
2024 BUDGET
WITH 2022 ACTUAL AND 2023 ESTIMATED
For the Years Ended and Ending December 31,**

10/13/23

	ACTUAL 2022	BUDGET 2023	ACTUAL 6/30/2023	ESTIMATED 2023	BUDGET 2024
BEGINNING FUNDS AVAILABLE	\$ 1,900,212	\$ 1,215,912	\$ 1,922,970	\$ 1,922,970	\$ 1,979,605
REVENUES					
Recreation Fees	193,937	300,000	123,383	209,000	213,000
Building Permit Fees	268,283	250,000	62,925	230,000	234,000
Wastewater Fees	119,734	111,000	80,264	161,000	164,000
Interest income	21,285	8,000	30,588	62,500	64,000
Other revenue	2,855	-	-	-	3,000
Total revenues	<u>606,094</u>	<u>669,000</u>	<u>297,160</u>	<u>662,500</u>	<u>678,000</u>
Total funds available	<u>2,506,306</u>	<u>1,884,912</u>	<u>2,220,130</u>	<u>2,585,470</u>	<u>2,657,605</u>
EXPENDITURES					
General and administrative					
Management/Administration	-	21,000	-	21,000	18,800
Equipment	7,413	65,000	11,144	15,000	65,000
Contingency	6,916	15,000	-	-	15,000
Planning					
CCBQWA Planning	17,823	105,000	7,705	95,000	10,000
Tributary Planning	41,022	-	-	-	60,000
Reservoir to 12-Mile Park Study	55,366	5,000	32,365	32,365	5,000
Special Studies/Projects					
SSP Bow Tie	2,468	-	-	-	-
SSP BMP Effectiveness	12,365	75,000	12,414	45,000	30,000
SSP PRF/PAP WQ Benefits	-	5,000	-	-	5,000
SSP Reservoir Nutrient mitigation	-	50,000	-	-	-
SSP Emerging SCM	78,020	-	-	-	-
SSP Watershed Master Plan	-	50,000	-	-	50,000
Total expenditures	<u>221,393</u>	<u>391,000</u>	<u>63,628</u>	<u>208,365</u>	<u>258,800</u>
TRANSFERS OUT					
Transfers to Pollution Abatement Fund	<u>361,943</u>	<u>401,400</u>	<u>178,295</u>	<u>397,500</u>	<u>406,800</u>
Total expenditures and transfers out requiring appropriation	<u>583,336</u>	<u>792,400</u>	<u>241,923</u>	<u>605,865</u>	<u>665,600</u>
ENDING FUNDS AVAILABLE	<u>\$ 1,922,970</u>	<u>\$ 1,092,512</u>	<u>\$ 1,978,207</u>	<u>\$ 1,979,605</u>	<u>\$ 1,992,005</u>
FACILITIES MAINTENANCE RESERVE	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
CAPITAL RESERVE	750,000	750,000	750,000	750,000	750,000
TOTAL DESIGNATED RESERVE	<u>\$ 850,000</u>				

No assurance provided. See summary of significant assumptions.

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
2024 BUDGET
SUMMARY OF SIGNIFICANT ASSUMPTIONS**

Services Provided

Cherry Creek Basin Water Quality Authority (the Authority) is a quasi-municipal corporation and political sub-division of the State of Colorado. Formed on June 16, 1988, the Authority was created by Colorado HB1029 to monitor the water quality in the Cherry Creek Basin and to construct facilities to control the accumulation of pollutants.

The District has no employees, and some operations and administrative functions are contracted.

The District prepares its budget on the modified accrual basis of accounting in accordance with the requirements of Colorado Revised Statutes C.R.S. 29-1-105 using its best estimates as of the date of the budget hearing. These estimates are based on expected conditions and its expected course of actions. The assumptions disclosed herein are those that the Authority believes are significant to the budget. There will usually be differences between the budget and actual results because events and circumstances frequently do not occur as expected, and those differences may be material. For financial statement reporting under generally accepted accounting principles (GAAP), the Authority uses the full accrual basis of difference from GAAP accounting for Fund Balance. Funds Available represents each fund's current assets less its current liabilities except for the current portion of long-term debt. In addition, the budget separates individual funds which are included as one entity in the GAAP presentation.

Colorado Revised Statute 25-8.5-111(3), as amended by Senate Bill 01-066 in 2001, states that the Authority must spend a minimum of 60% of revenues (collected from fees, tolls, and property tax) on the construction and maintenance of pollution abatement projects in the Cherry Creek Basin or on payments due on debt incurred entirely for such projects. The minimum pollution abatement expenditure requirement is not restricted by fund but is applied to the Authority as a whole.

Revenues

Property Taxes

The primary source of revenue is property taxes. Property taxes are levied by the Authority's Board of Directors. The levy is based on assessed valuations determined by the County Assessor generally as of January 1 of each year. The levy is normally set by December 15 by certification to the County Commissioners to put the tax lien on the individual properties as of January 1 of the following year. The County Treasurer collects the determined taxes during the ensuing calendar year. The taxes are payable by April or, if in equal installments, at the taxpayer's election, in February and June. Delinquent taxpayers are notified in August and generally sales of the tax liens on delinquent properties are held in November or December. The County Treasurer remits the taxes collected monthly to the Authority.

The calculation of the taxes levied is displayed on the Property Tax Summary Information page of the budget.

Senate Bill 21-293 among other things, designates multi-family residential real property (defined generally, as property that is a multi-structure of four or more units) as a new subclass of residential real property. For tax collection year 2023, the assessment rate for single family residential property decreases to 6.95% from 7.15%. The rate for multifamily residential property, the newly created subclass, decreases to 6.80% from 7.15%. Agricultural and renewable energy production property decreases to 26.4% from 29.0%. Producing oil and gas remains at 87.5%. All other nonresidential property stays at 29%.

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
2024 BUDGET
SUMMARY OF SIGNIFICANT ASSUMPTIONS**

Revenues - (continued)

Specific Ownership Taxes

Specific ownership taxes are set by the State and collected by the County Treasurer, primarily on vehicle licensing within the County as a whole. The specific ownership taxes are allocated by the County Treasurer to all taxing entities within the County. The budget assumes that the Authority's share will be equal to approximately 7% of the property taxes collected from Arapahoe County and 8% of the property taxes from Douglas County.

Net Investment Income

Interest earned on the Authority's available funds has been estimated based on historical interest earnings.

Fees

The Authority receives recreation fees from the State of Colorado. These fees are a portion of the entry fees to Cherry Creek State Park. The fees are remitted to the Authority on a monthly basis.

The Authority receives building permit fees from various governmental entities that reside within the Authority's borders. These fees are typically remitted on a quarterly basis.

The Authority receives wastewater surcharges from the surrounding water and sanitation districts that operate wastewater treatment facilities and discharge into the Cherry Creek Basin. These surcharges are remitted to the Authority on a quarterly basis by each District.

Expenditures

Administrative and Operating Expenditures

Operating expenditures include the estimated services necessary to maintain the Authority administrative viability such as legal, management, accounting, insurance, banking, meeting expense and other administrative expenses. Estimated expenditures related to water quality management were also included in the General Fund budget.

County Treasurer's Fees

County Treasurer's fees have been computed at 1.50% of property tax collections.

Capital Projects

Anticipated expenditures for capital projects are detailed on the Pollution Abatement Fund page of the budget.

**CHERRY CREEK BASIN WATER QUALITY AUTHORITY
2024 BUDGET
SUMMARY OF SIGNIFICANT ASSUMPTIONS**

Debt and Leases

The Authority has no bond indebtedness or any operating or capital leases.

Reserves

Emergency Reserve

The Authority has provided for an Emergency Reserve equal to at least 3% of fiscal year spending as defined under the TABOR Amendment.

Reservoir Destratification Service Plan Reserve

The Authority has provided for a reservoir destratification service plan reserve of \$50,393 for use in subsequent year destratification service plan expenditures.

Facilities Maintenance Reserve

The Authority has provided for a facilities maintenance reserve of \$100,000 for use in subsequent year capital maintenance projects.

Capital Reserve

The Authority has provided for a total capital reserve of \$750,000 for use in subsequent year capital replacement projects.

This information is an integral part of the accompanying budget.

Cherry Creek Stewardship Partners
Report for the Cherry Creek Basin Water Quality Authority
3rd Qtr. 2023

We enjoyed a very successful Watershed Conference this year with support from the Cherry Creek Basin Water Quality Authority, SEMSWA, Arapahoe County Open Spaces, Aurora Water, Castle Rock Water, City and County of Denver, Douglas County, City of Castle Pines, City of Greenwood Village, City of Lone Tree, Parker Jordan Metro District, Town of Parker, Parker Water & Sanitation, Wright Water, LRE Water, Muller Engineering, RESPEC, R2 Engineers, RG Engineers, ICON Engineering, ERO Resources, Pinyon Environmental, Jacobs Engineering, Matrix Design Group, Stream Landscape Architecture & Planning, Valerian LLC, Pawnee Buttes Seed, Barr/Milton Watershed Association and SPLASH.

Over 100 attendees enjoyed a full day of discussions on timely topics including water quality and biometrics in the Cherry Creek Reservoir, updates on stormwater management, the latest on land use and planning in uncertain times. We hosted a panel which included speakers from the Chatfield Watershed Authority, Bear Creek Watershed Association, Barr Milton Watershed Association and the U.S. Army Corps of Engineers. We explored the history of water management in the Cherry Creek Basin and opportunities in the upper watershed, enjoyed learning about working with some of our natural allies – the Beaver, and were inspired by a teacher who understands the benefits of watershed protection and brings young students outdoors to learn and thrive.

Jim Wulliman, Muller Engineering, received the Marie Mackenzie Legacy Award at an inspiring lunchtime presentation. Please see the agenda for the day (Val, can you include a link for the curious?) We appreciate all our speakers with a special thank you to Jane Clary for her technical knowledge and guidance and to Val Endyk for her help with logistics, organization, and hospitality.

Other events included ‘Fitting the Farm for the Future’ a unique event at the 17-Mile House and a presentation on archeological history of the Cherry Creek watershed and an autumnal equinox hike at Cherry Creek Valley Ecological Park.

Upcoming events include Science Fair Kickoff – 10/1/23, Winter Solstice Hike – 12/16/23, Hawk Walk on Cottonwood Creek – 1/27/24, Science Fair and Awards 2/23/24.

Task Memorandum

Task: RDS Operations Report October

Date: 10/13/23

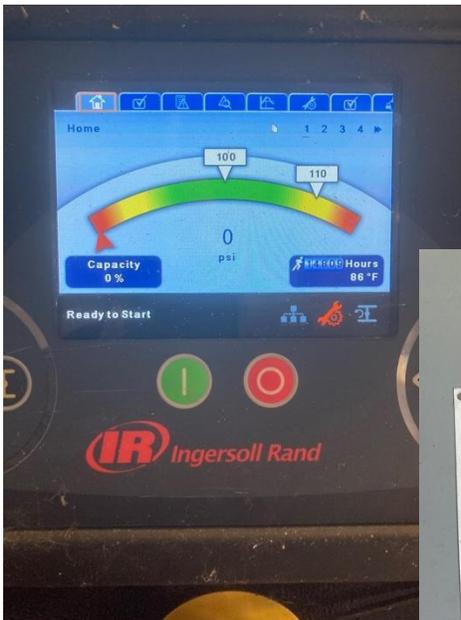
To: Board and TAC

By: Ricardo Gonçalves, PE

Yearly Inspection and Maintenance- The yearly inspection and maintenance on the aeration system was done and completed on October 4, 2023, by Foster, Dirt and Construction. Foster Dirt has taken over the duties that Blair Wacha with B&RW had previously done for the last number of years. Blair chose to retire this year, and actually trained Justin Foster on the aeration system maintenance activities last year while he was a member of the work crew. Blair was on the work crew this year to aid in the transition. No major issues were encountered. A few of the cam lock levers and pins were replaced due to corrosion. Blair noted that over the years, he has replaced more pins and cams in the area of the reservoir where Cottonwood Creek drains into the reservoir than any other place in the reservoir. Given stainless steel can corrode (rust) in the presence of high acidity and anoxic water condition conditions, Blair and I wonder if those conditions could be caused by wastewater effluent presence in Cottonwood Creek drainage from the upstream wastewater treatment plants.



Compressor Shutdown-On October 5th, 2023 at 8:15 am, the compressor was shut down in accordance with Authority Policies and Procedures. The newly installed drip legs were released of accumulated water to prevent water freezing in the pressure reducers, and water was blown off from the compressor and the regulator tank. This year a new procedure was implemented whereby the air discharge valves downstream of the pressure reducers were shut down very slowly while the compressor was still running to shut off the air to the aeration system, gradually. This was to prevent a sudden back pressure on the aeration system heads that has caused some of the O-rings to blow out in the past. After the valves were shut, the compressor was then shut down.





Task Memorandum

Task: PRF Maintenance and Repair Report October

Date: 10/13/23

To: Board and TAC

By: Ricardo Gonçalves, PE

PRF Maintenance and Repair Inspections- The annual inspections have been completed and the final report is in process and nearly complete. Items for maintenance and repair have been identified and their cost allocated to the draft 2024 budget.

The final report is expected to be complete by the end of this month.

MEMORANDUM

Date:	October 9, 2023
To:	Cherry Creek Basin Water Quality Authority Board of Directors Jane Clary, CCBWQA Technical Manager
From:	Erin Stewart, LRE Water
Subject:	Water Quality Update – October 2023

CCBWQA Data Portal Water Quality Update Page Link - <http://ccbwqportal.org/wq-update/chlorophyll-a>

- Navigate to Chl- α, CCR Inflow Concentrations and Comparison, Field Depth Profile, Nutrients Depth Profile

The Water Quality Update pages provide a brief visual of the data collected during the current water year (WY 2023 - October 2022 through September 2023) with the data from previous years available as a reference. This memo provides a brief description of the highlights from the most recent monitoring data available on the data portal.

CCR Inflow Phosphorus and Nitrogen Concentrations and Comparison to Prior 5-Year Average

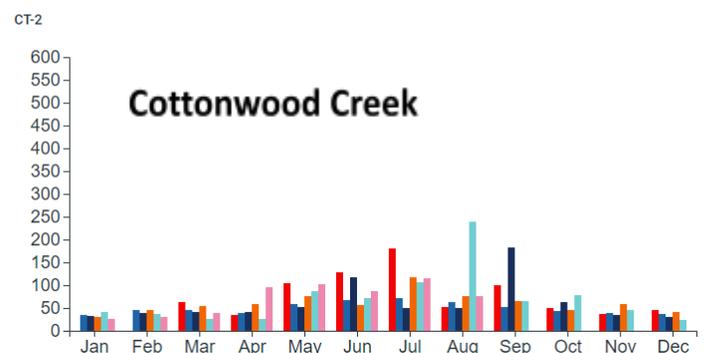
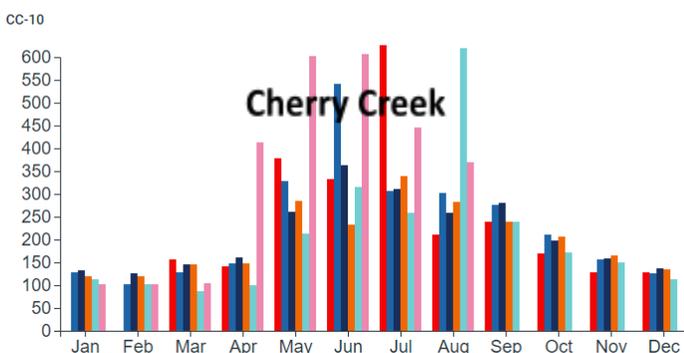
Site		Cherry Creek @ CC-10		Cottonwood Creek @ CT-2	
Month	Flow	Total Phosphorus (µg/L)	Total Nitrogen (µg/L)	Total Phosphorus (µg/L)	Total Nitrogen (µg/L)
July	Base	297 (294)	1,160 (1,010)	74 (74)	1,570 (1,329)
July	Storm	447 (531)	1,580 (1,780)	115 (144)	2,100 (1,908)
August	Base	370 (273)	1,580 (705)	76 (60)	1,580 (1,135)

* 5-year mean concentration values are shown in parentheses for reference. Values in green or red are respectively lower or higher than the 2018-2022 5-year mean.

The total average (base flow and storm flow) concentrations are calculated monthly. Although the values do not represent flow-weighted concentrations, the simple averages are included to compare long-term monthly average concentrations. The graphs below represent the average monthly inflow concentrations in comparison to historical conditions. The elevated nutrient concentrations of the samples collected during the spring and summer storm events are evident. Both the phosphorus and nitrogen concentrations were higher than the 5-year mean concentrations for base flows in July and August. However, the storm phosphorus concentrations were lower in July 2023 than the previous 5-year means in both Cherry Creek and Cottonwood.

Total Phosphorous (ug/l)

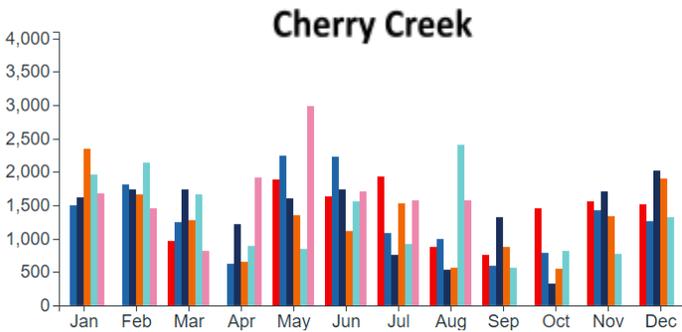
● 2015 ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021 ● 2022 ● 2023



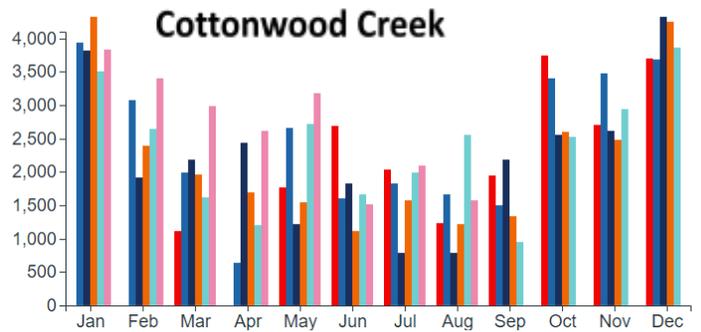
Total Nitrogen (ug/l)

● 2015 ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021 ● 2022 ● 2023

cc-10



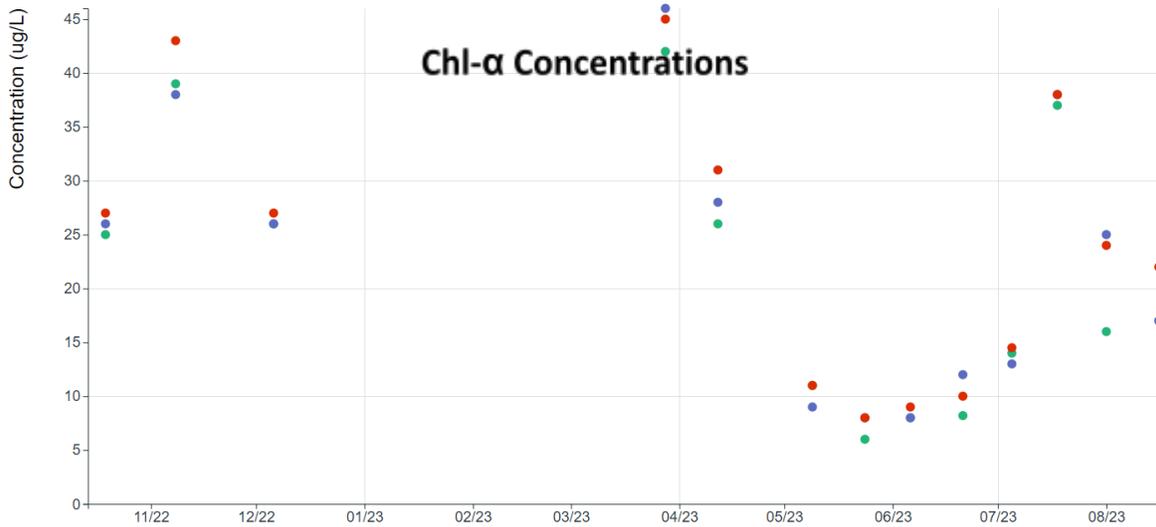
CT-2



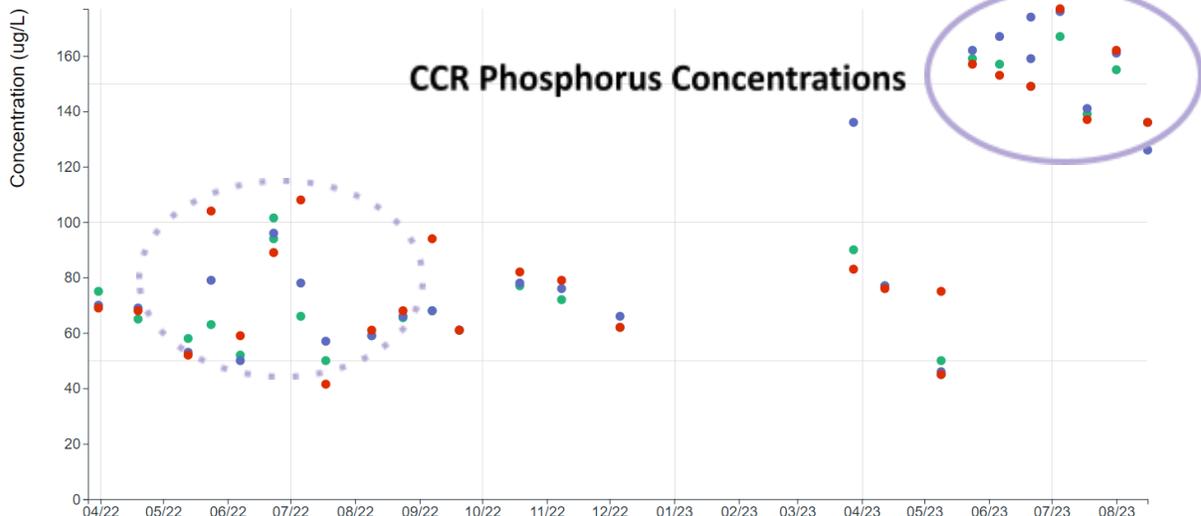
Chl-α

Cherry Creek Reservoir has a chlorophyll-α seasonal standard of 18.0 µg/L which is based on the mean concentrations between the months of July and September. The chlorophyll-α µ concentration averaged 8.5 µg/L in May, 8.3 µg/L in early June and 10.4 µg/L later in the month. The 2023 concentrations are lower than those normally observed this time of year. The chl- α concentrations for early July were 13.8ug/L (not displayed) but are expected to be higher later in July based on observed conditions.

● CCR1 ● CCR2 ● CCR3 ● CCR Composite



Cherry Creek Reservoir Nutrients



The phosphorus concentrations in the Reservoir are elevated this year compared to the recent few years. The phosphorus concentrations this year averaged ~150 when in previous years they averaged <100ug/L during the same time period. These

higher nutrient concentrations provide the potential for increased productivity (higher chl- α , cyanobacteria blooms), especially when the weather warms and there is less precipitation.

Plankton

During CPW weekly monitoring, cyanotoxin was detected above the recreational threshold (8ug/L) at the end of July and the Reservoir was closed to contact in the affected areas. It was reopened a few days later but caution signs remained in place for a while until the bloom had dissipated.

Monitoring Station Repairs and Reporting Modification Updates

All the monitoring stations damaged in the May and June storms have been repaired or replaced and are back “online”. However, there are still elevated water levels due to culverts clogged with debris and beaver activity at Lakeview Dr. The clogged culverts have caused a major backwater effect which is diverting some of the water into culverts further to the west which bypass the monitoring station at CC-10. It appears that there is nothing that can be done until the road repairs are completed. Unfortunately, this means that the flow measurements at CC-10 are currently not accurate, and Lakeview Drive can not be used as a backup due to the damage and clogged culverts.

Due to the missing level and associated flow calculations at the two monitoring stations upstream of the Reservoir during the storm events and the damage to Lakeview Dr, the water balance for 2023, and some of 2024 will need to be estimated. We will use the mean relative flows Cherry Creek and Cottonwood Creek as well as information on Reservoir water storage and releases at the outlet available from the USACE, USGS, and DWR.

Last, we are currently looking for a new laboratory to complete phytoplankton and zooplankton analysis due to the recent passing of Ann St. Amand the owner of Phycotech which has analyzed the Cherry Creek Reservoir samples since 2016. It will be difficult to obtain the same level of detail provided by Phycotech so we will need to evaluate how to normalize the data once a new lab is defined.