



Notice of Regular Meeting
Cherry Creek Basin Water Quality Authority
Board of Directors Meeting
Thursday, March 16, 2023 at 8:30 a.m.

The meeting will be conducted in-person and virtually as set forth below.

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 February 16, 2023 Minutes (enclosed)
 - b. Acceptance of the Schedule of Cash Position dated March, 2023 (enclosed)
 - c. Acceptance of the Paid Claims for February, 2023 (enclosed)
 - d. Approval of Unpaid Claims as of March, 2023 (enclosed)
 - e. Approval of 2023 Agreements (enclosed)
 - i. Amendment to RG and Associates 2023 Agreement
3. Direction and/or Action (10 minutes)
 - a. Approval of Cherry Creek at Dransfeldt IGA Amendment #21-05.04B (Borchardt, enclosed)*
 - b. Acceptance of the Final [WY 2022 CCBWQA Monitoring Report](#) (Stewart, enclosed)
 - c. Acceptance of the [2022 CCBWQA Annual Report on Activities](#) (Clary, enclosed)
4. Discussion (10 minutes)
 - a. Modeling and Watershed Committee Direction (Clary, enclosed)
 - b. Reg. 38 Rulemaking Hearing Update - CDPHE Direction Change (Clary/DiToro, enclosed)
5. Presentations
6. Board Member Items
7. Updates (see packet)
 - a. Technical Manager (Clary)
 - b. Cherry Creek Stewardship Partners Update and [Events](#) (Davenhill)
 - c. TAC (Erickson)
 - d. Contract Staff (see enclosed memos)
 - i. PAPM
 - a. CIP Status Report (Borchardt)
 - b. Maintenance and Operations Status Report (Goncalves)
 - ii. [Water Quality Update](#) and [Memo](#) (Stewart, enclosed)
 - iii. Regulatory (DiToro)
 - iv. Land Use Referrals - [2023 Tracking](#) (Endyk)
 - e. Legal
 - f. Other - Reminder of 2023 Workshops
 - i. Cherry Creek in CCSP Muller Report and BMP Effectiveness Workshop (Agenda enclosed)
Today following Board meeting
 - ii. Watershed Plan Process - September 21, 2023 8:30-11:30 am
8. Executive Session pursuant to Section 24-6-402(4) C.R.S., if necessary.
9. Adjournment



**Cherry Creek Basin Water Quality Authority
Minutes of the Board of Directors Meeting
Thursday, February 16, 2023 at 9:00 a.m.**

Board Members Present

Abe Laydon, Douglas County (zoom)
Bahman Hatami, Governor's Appointee (zoom)
Bill Ruzzo, Governor's Appointee
Christopher Lewis, Vice Chair, Governor's Appointee
Geoff Blue, City of Castle Pines - Alternate
Jessica LaPierre, City of Aurora - Alternate
John Woodling, Governor's Appointee
Joshua Rivero, Chair, Town of Parker
Leslie Summey, Arapahoe County
Luis Tovar, Special District Representative
Margaret Medellin, Governor's Appointee
Max Brooks, Town of Castle Rock
Mike Anderson, City of Lone Tree
Ryan Adrian, Douglas County - Alternate (zoom)
Stephanie Piko, City of Centennial
Steve Sundberg, City of Aurora
Tom Stahl, City of Greenwood Village

TAC Members Present

Alex Mestdagh, Town of Parker (zoom)
Ashley Byerley, SEMSWA
Caitlin Gappa, Douglas County Health Department
David Van Dellen, Town of Castle Rock
Jacob James, City of Lone Tree
James Linden, SEMSWA - Alternate (zoom)
Jason Trujillo, Board Appointee, Cherry Creek State Park
Jon Erickson, TAC Chair, Board Appointee, Colorado Parks and Wildlife
Lisa Knerr, TAC Vice Chair, Arapahoe County
Rick Goncalves, Board Appointee
Steve Chevalier, Arapahoe County Health Department

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
Larry Butterfield, Cherry Creek State Park
Marty Easter, Arapahoe County Health

Nancy Sharpe, former Board member, Arapahoe County
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 9:03 am and led in the pledge of allegiance.

2. Recognition of Former Board Members Nancy Sharpe and Caryn Johnson

On behalf of the Board, Director Rivero presented Nancy Sharpe with a letter of appreciation and a plaque commemorating her years of service on the CCBWQA Board of Directors. Caryn Johnson was unable to attend the meeting in person and will receive her letter of appreciation and plaque in the mail.

3. Oaths of Office and Introductions

- a. **Cathie Frazzini - City of Lone Tree, Alternate**
- b. **Leslie Summey - Arapahoe County**
- c. **Mike Anderson - City of Lone Tree**

Director Rivero administered the oath of office for Mike Anderson.

Cathie Frazzini was not present. Her oath will be administered at a later time.

Leslie Summey's oath was administered after agenda item 6c.

4. Consent Agenda

- a. **Approval of the January 19, 2023 Minutes**
- b. **Acceptance of the Schedule of Cash Position dated February, 2023**
- c. **Acceptance of the Paid Claims for January, 2023**
- d. **Approval of Unpaid Claims as of February, 2023**
- e. **Approval of 2023 Agreements**
 - i. **ERO**
 - ii. **Fiscal Focus Partners Engagement Letter**
 - iii. **TCW Risk Management Agency Fee Agreement**

Director Rivero removed Consent Agenda item 4a, Approval of the January 19, 2023 Minutes, and moved it to Direction and/or Action.

Director Piko moved to accept the Consent Agenda with the removal of item 4a. Seconded by Director Brooks. The motion carried.

5. Direction and/or Action

- a. **Approval of the January 19, 2023 Minutes (*Moved from Consent*)**

Director Rivero made the following change to the January 19, 2023 minutes:

Originally read, "Director Rivero would like to encourage Board members to attend in person to facilitate discussion. Unless there are extenuating circumstances, all voting Board members should be present in person in order to vote."

Updated to read, "Director Rivero would like to encourage Board members to attend in person to facilitate discussion. All voting Board members shall be present in person in order to vote."

Director Blue moved to approve the January 19, 2023 Minutes as amended. Seconded by Director Woodling. The motion carried.

b. Election of Officers: Chair, Vice Chair, Secretary/Treasurer, Assistant Secretary

Director Woodling moved to re-appoint Josh Rivero as Chair, Christopher Lewis as Vice-Chair, and John McCarty as Secretary/Treasurer and to appoint Bill Ruzzo as Assistant Secretary. Seconded by Director Piko. The motion carried.

c. Acceptance of Project Summary Reports

- i. East Boat Ramp Shoreline Stabilization Phase 2**
- ii. Cherry Creek Stream Reclamation at 12-mile Park Phase 3**
- iii. McMurdo Gulch 2022 Stream Reclamation**

Rich Borchardt presented the project summaries for the [East Boat Ramp Shoreline Stabilization Phase 2](#), [Cherry Creek Stream Reclamation at 12-mile Park Phase 3](#), and [McMurdo Gulch 2022 Stream Reclamation](#) projects highlighting the photos and providing explanation for each project.

Discussion included a suggestion for cost per linear foot in future project summaries.

Director Piko moved to accept the project summaries for the East Boat Ramp Shoreline Stabilization Phase 2, Cherry Creek Stream Reclamation at 12-mile Park Phase 3, and McMurdo Gulch 2022 Stream Reclamation projects. Seconded by Director Lewis. The motion carried.

d. Approve RDS Operations & Maintenance Plan

Rick Goncalves provided his recommendations for the Reservoir Destratification System (RDS) operations and maintenance for 2023. Rick's [Action Item Memo](#) details the recommendations outlined in the [2022 RDS Operations and Maintenance Annual Report](#) accepted by the Board at the January 19, 2023 meeting. The cost for these recommendations is accounted for in the 2023 budget.

Recommendations:

- Have Ingersoll Rand (IR) clean the compressor coolers at a frequency of every two months during the operating season to minimize the chances of another high temperature shutdown like what happened from September 2-7, 2022. IR has indicated that this can be done for no increase in cost in their maintenance agreement.
- Have the RDS manager evaluate options to improve compressor operation communications with IR to minimize the length of any future shutdowns, to be included in the IR PackageCare plan for no increase in cost.

Director Piko moved to approve the request to increase compressor cooler cleaning to every two months for no additional cost. Seconded by Director Lewis. The motion carried.

Director Ruzzo moved to approve the request to evaluate options to improve compressor operation communications with Ingersoll Rand for no additional cost. Seconded by Director Blue. The motion carried.

6. Discussion

a. DRAFT [2022 CCBWQA Annual Report on Activities](#)

Carolyn Nobel provided a demonstration-based presentation of the online 2022 CCBWQA Annual Report on Activities. It is the 5th Annual e-report available on the [CCBWQA data portal](#). A new stand-alone PDF [Executive Summary](#) has also been created for this Annual Report that will be suitable for sharing with a wide audience.

Discussion included:

- Castle Rock noted the P-free initiative should be highlighted, along with the turf ordinances being undertaken by Castle Rock and Aurora.
- The data portal and Annual Report could be a resource for schools. Consider outreach opportunities to schools through Cherry Creek Stewardship Partners.

- Additionally, the data portal could be an opportunity to connect with higher academic institutions. Of note is the CSU SPUR lab. Jane Clary suggested drafting a letter to Universities.
- A link to the Executive Summary will be emailed to CCBWQA contacts. Comments on the 2022 Annual Report are requested by March 3rd.

b. Update on Submittal of Lake Nutrients Rebuttal Statement

Jessica DiToro provided an update that the Lake Nutrients rebuttal has been submitted.

Jane provided a summary of the [rebuttal statements](#) with the exception of the WQCD's, which was not yet available. There are many unresolved issues among multiple parties related to hearing. CCBWQA has kept its focus very narrow to request a delayed effective date which could allow time to develop a site specific standard.

c. Technical Subcommittees

Jane Clary provided an update that at the January planning meeting several potential committees were identified.

Current Board appointed committees include the Technical Advisory Committee (TAC), the Executive Committee, and the Reg 38 Special Committee.

Current TAC Subcommittees include the MS4 Subcommittee.

Other suggested topics for future committees or TAC subcommittees:

- Modeling - including Reservoir and Watershed Models
- Watershed Plan Update
- Reservoir Destratification System (RDS)
- Capital Improvement Program (CIP)

Discussion included:

- If there are Board members with expertise or interest in any of the suggested committees, participation is encouraged.
- A [committee fact sheet](#) is provided in the Board binder.
- The Board directed staff to compile a description of suggested committees/subcommittees with the goals and purpose, member roles, and expected duration.
- A suggestion included temporary/ad hoc committees and potentially phasing the committees, focusing first on committees needed now.
- Time commitment and budget implications need to be considered.
- Currently, the Executive Committee oversees finances, but would welcome additional Board input.
- The Board will vote on the committees at a later meeting.

7. Presentations

a. Water Quality Standards 101

Postponed to a future meeting.

8. Board Member Items

Director Piko shared that Valley Country Club did not reengage with Avalon. She encouraged the Board to continue looking into floodplain property acquisition and the preservation of wetlands when opportunity arises. Director Lewis also encouraged future consideration of property acquisition of parcels in floodplains under threat of development.

9. Updates

a. Technical Manager (Clary)

i. [Board Binder](#) Update

An electronic version and an option for a printed version of the new Board binder is available and will be highlighted during the new member orientation.

Jane Clary noted that future capital improvement projects may need increased funding due to inflation.

ii. Board Orientation (following Board meeting)

iii. TAC Members

Stewardship Partners provided a more detailed [update](#) to the TAC at the February 2, 2023 TAC Meeting. Parker Water And Sanitation District will be submitting a request at the Regulation 72 Informational Hearing in April regarding phosphorus limits in dewatering discharges.

Jon Erickson encouraged committee/subcommittee formation to propel the Authority's work. The Authority could also consider inviting other experts to give input on the committees.

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

c. TAC (Erickson)

d. Contract Staff (see enclosed memos)

i. PAPM

a. [CIP Status Report](#) (Borchardt)

b. [Maintenance and Operations Status Report](#) (Goncalves)

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

iii. Regulatory (DiToro)

iv. Land Use Referral Summary

a. **2023 LUR Tracking [Link](#) (Endyk)**

e. Legal

i. Update on Cherry Creek Project Authority Due Diligence Application

Legal counsel for the Authority informed the Board that the Cherry Creek Project Water Authority has concluded its due diligence application and that the Court has entered a decree. Evan Ela, the Basin Authority's water rights attorney, reviewed the decree on the Authority's behalf prior to its being entered.

The bylaws need updating; Tim will be working on this.

f. Other: Reminder of 2023 Workshops

i. Cherry Creek in CCSP Muller Report and BMP Effectiveness Workshop - March 16, 2023 8:30-11:30 am

ii. Watershed Plan Process - September 21, 2023 8:30-11:30 am

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

11. Adjournment

There being no further business to come before the Board, Director Rivero moved to adjourn the meeting at 11:07 am.

Cherry Creek Basin Water Quality Authority
Schedule of Cash Position
December 31, 2022
as of March 10, 2023

	General Fund	Pollution Abatement Fund	Enterprise Fund	Total
<u>1st Bank - Checking Account</u>				
Balance as of 12/31/22	\$ 31,345.65	\$ 22,582.47	\$ 6,235.63	\$ 60,163.75
Subsequent activities:				
01/19/23 Monthly Transfer for bill pay	108,000.00	207,000.00	10,000.00	325,000.00
01/24/23 Bill.com Payment	(113,714.25)	(199,254.57)	(5,289.13)	(318,257.95)
01/26/23 Verizon ACH	(51.49)	-	-	(51.49)
01/31/23 January VISA Charges	(1,081.58)	-	-	(1,081.58)
01/31/23 Interest Income	11.86	-	-	11.86
02/02/23 Visa Charge NALMS refund	75.00	-	-	75.00
02/09/23 Visa Charge Alpine Trophies	(160.23)	-	-	(160.23)
02/15/23 Visa Charge King Soopers	(40.47)	-	-	(40.47)
02/15/23 Visa Charge Yolanda's Tacos	(314.64)	-	-	(314.64)
02/17/23 Bill.com Payment	(98,102.53)	(173,468.08)	(559.50)	(272,130.11)
02/15/23 Monthly Transfer for AP	100,000.00	170,000.00	-	270,000.00
02/21/23 Visa Charge Website	(200.00)	-	-	(200.00)
02/27/23 Verizon ACH Payment	(51.49)	-	-	(51.49)
02/28/23 Interest Income	6.44	-	-	6.44
03/03/23 Visa Charge Website	(200.00)	-	-	(200.00)
03/06/23 Visa Charge UPS Store	(13.91)	-	-	(13.91)
<i>Anticipated Activities</i>				
Monthly Transfer for AP	82,000.00	25,000.00	4,000.00	111,000.00
Bill.com Open Invoices	(77,254.39)	(31,159.84)	(4,897.00)	(113,311.23)
<i>Anticipated balance</i>	<u>\$ 30,253.97</u>	<u>\$ 20,699.98</u>	<u>\$ 9,490.00</u>	<u>\$ 60,443.95</u>
<u>ColoTrust General - (8001)</u>				
Balance as of 12/31/22	\$ 858,139.58	\$ 2,335,058.75	\$ 1,509,219.44	\$ 4,702,417.77
Subsequent activities:				
01/13/23 Ptax Arapahoe (Dec)	5,493.46	-	-	5,493.46
01/13/23 Ptax Douglas (Dec)	9,631.95	-	-	9,631.95
01/19/23 Monthly Transfer for AP	(108,000.00)	(207,000.00)	(10,000.00)	(325,000.00)
01/31/23 Interest Income	17,788.36	-	-	17,788.36
01/31/23 Dev Checks - 2022 Rev (AR)	-	-	23,808.11	23,808.11
02/10/23 Ptax Arapahoe (Jan)	21,368.96	-	-	21,368.96
02/10/23 Ptax Douglas (Jan)	56,418.20	-	-	56,418.20
02/15/23 Monthly Transfer for AP	(100,000.00)	(170,000.00)	-	(270,000.00)
02/28/23 Interest Income	15,879.62	-	-	15,879.62
02/28/23 Dev Checks - 22/23 Rev (AR)	-	-	30,503.59	30,503.59
<i>Anticipated Activities</i>				
Revenue Allocation to PAF	(75,948.33)	108,535.35	(32,587.02)	-
Monthly Transfer for AP	(82,000.00)	(25,000.00)	(4,000.00)	(111,000.00)
<i>Anticipated balance</i>	<u>\$ 618,771.80</u>	<u>\$ 2,041,594.10</u>	<u>\$ 1,516,944.12</u>	<u>\$ 4,177,310.02</u>
<u>ColoTrust Pollution Abatement - (8002)</u>				
Balance as of 12/31/22	\$ -	\$ 54,399.83	\$ -	\$ 54,399.83
Subsequent activities:				
01/31/23 Interest Income	-	210.91	-	210.91
02/28/23 Interest Income	-	198.82	-	198.82
<i>Anticipated balance</i>	<u>\$ -</u>	<u>\$ 54,809.56</u>	<u>\$ -</u>	<u>\$ 54,809.56</u>
<u>CSAFE - Savings Account</u>				
Balance as of 12/31/22	\$ 859,161.30	\$ 42,246.04	\$ 355,976.40	\$ 1,257,383.74
Subsequent activities:				
01/31/23 Interest Income	-	-	4,769.83	4,769.83
02/28/23 Interest Income	-	-	4,547.76	4,547.76
<i>Anticipated balance</i>	<u>\$ 859,161.30</u>	<u>\$ 42,246.04</u>	<u>\$ 365,293.99</u>	<u>\$ 1,266,701.33</u>
<i>Total funds available as of date above</i>	<u>\$ 1,508,187.07</u>	<u>\$ 2,159,349.68</u>	<u>\$ 1,891,728.11</u>	<u>\$ 5,559,264.86</u>

Effective monthly yield (as of 2/28/2023)

1st Bank - 0.100%* if Balance >\$20,000
ColoTrust Plus - 4.7379%
CSAFE - 4.69%

Cherry Creek Basin Water Quality Authority
Paid Claims February 9, 2022 through March 10, 2022

Process Date	Vendor	Invoice Number	Payment Reference	Amount
2/17/2023	Cherry Creek State Park	Multiple	P23021601 - 2606068	500.00
2/17/2023	Cherry Creek Stewardship Partners	107030	P23021601 - 2606076	13,000.00
2/17/2023	CliftonLarsonAllen LLP	3561151	P23021601 - 2606088	5,716.38
2/17/2023	Collins Cole Flynn Winn & Ulmer, PLLC	3004	P23021601 - 2606093	13,038.00
2/17/2023	Davis Graham & Stubbs LLP	844092	P23021601 - 2606078	3,124.00
2/17/2023	LRE Water	22021	P23021601 - 2606084	44,332.90
2/17/2023	Pinpoint Systems Inc.	9793	P23021601 - 2606096	502.50
2/17/2023	R2R Engineers, Inc.	2023-01	P23021601 - 2606098	18,226.98
2/17/2023	RESPEC	INV-1222-1608	P23021601 - 2606080	10,200.00
2/17/2023	Southeast Metro Stormwater Authority	1/20/2023	P23021601 - 2606082	138,000.00
2/17/2023	Valerie Endyk	13	P23021601 - 2606086	5,962.50
2/17/2023	Wright Water Engineers, Inc.	Multiple	P23021601 - 2606073	19,526.85
			Subtotal	\$ 272,130.11
Other Payments				
2/9/2023	Alpine Trophies	-	Visa	\$ 160.23
2/15/2023	King Soopers	-	Visa	40.47
2/17/2023	Yolanda's Tacos	-	Visa	314.64
2/21/2023	Get Streamline.com Website	-	Visa	200.00
2/27/2023	Verizon	-	ACH Payment	51.49
3/3/2023	Get Streamline.com Website	-	Visa	200.00
3/6/2023	The UPS Store	-	Visa	13.91
			Subtotal	\$ 980.74
			Total Payments	\$ 273,110.85

**Cherry Creek Basin Water Quality Authority
Unpaid Claims as of 03/10/23**

Date	Vendor	Invoice #	Account Description	Amount
2/28/2023	CliftonLarsonAllen LLP	3595208	107000 - Accounting	4,953.52
2/28/2023	Collins Cole Flynn Winn & Ulmer, PLLC	3120	107460 - Legal services	8,933.50
1/31/2023	Davis Graham & Stubbs LLP	845452	107050 - Regulatory Support	641.00
2/25/2023	LRE Water	22281	107000-107999 -GF Accounts	42,409.12
2/25/2023	LRE Water	22281	117712 - PRF Reservoir Destratification	483.75
1/21/2023	Muller Engineering Company	35952	407720 - Reservoir to 12-Mile Park Study	2,631.50
2/20/2023	Muller Engineering Company	36075	407720 - Reservoir to 12-Mile Park Study	1,584.50
2/28/2023	Pinpoint Systems Inc.	9817	107481 - Office expense	1,282.50
2/28/2023	R2R Engineers, Inc.	2023-02	107440 - Management/Administration	6,386.25
2/28/2023	R2R Engineers, Inc.	2023-02	117440 - Management/Administration	12,846.80
1/31/2023	RESPEC	INV-0123-1616	117440 - Management/administration	1,024.29
1/31/2023	RESPEC	INV-0123-1615	117728 - Reservoir Shoreline Stabilization - East Shade Shelter	5,151.50
1/31/2023	RG and Associates LLC	152921	107000-107999 -GF Accounts	2,840.00
1/31/2023	RG and Associates LLC	152921	117000-117999 PAF Accounts	1,160.00
2/28/2023	RG and Associates LLC	152977	107000-107999 -GF Accounts	1,815.00
2/28/2023	RG and Associates LLC	152977	117000-117999 PAF Accounts	82.50
2/25/2023	Valerie Endyk	14	107010 - Administrative Assistant	6,318.75
2/28/2023	Wright Water Engineers, Inc.	66074	407736 - Special Studies/Projects: BMP Effectiveness	681.00
2/28/2023	Wright Water Engineers, Inc.	66075	107000-107999 -GF Accounts	1,674.75
2/28/2023	Wright Water Engineers, Inc.	66075	117000-117999 PAF Accounts	10,411.00

Total Claims \$ 113,311.23

General Fund	\$ 77,254.39
Pollution Abatement Fund	31,159.84
Enterprise Fund	4,897.00
Total Claims by Funding Source	<u><u>\$ 113,311.23</u></u>

* by vendor

FIRST AMENDMENT
TO
AGREEMENT FOR CONSULTING SERVICES

THIS FIRST AMENDMENT TO AGREEMENT FOR CONSULTING SERVICES (“First Amendment”) is entered into as of the ___ day of _____, 2023 to be effective as of March 1, 2023 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, and **RG AND ASSOCIATES, LLC**, a Colorado limited liability company, (“Consultant”) whose address is 4885 Ward Road, Suite 100, Wheat Ridge, Colorado 80033. Authority and Consultant may hereinafter singularly be referred to as “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, on or about October 20, 2022, the Authority entered into an Agreement for Consulting Services with Consultant, (“Consultant”) whereby Consultant agreed to act as the Authority’s Water and Wastewater and Reservoir Destratification System (“RDS”) coordinator; and

WHEREAS, the Authority and Consultant have determined that it is desirable for Consultant to provide additional services in connection with the operation and maintenance of the Authority’s Pollution Reduction Facilities (“PRF’s”) located within the Cherry Creek State Park (“Additional Services”); and

WHEREAS, at the request of the Authority, Consultant provided Authority with a Scope of Services for Additional Services, which is attached hereto as **Exhibit A-1**; and

WHEREAS, the Authority and Consultant desire to amend the Agreement to reflect the Additional Services that Consultant will perform during 2023 and to increase Consultant’s compensation under the Agreement accordingly.

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

1. **Definitions**. All capitalized terms in this First Amendment shall have the same meaning as in the Agreement.
2. **Additional Services**. The Scope of Services as set forth in **Exhibit A** to the Agreement is hereby amended to include the Additional Services as set forth in **Exhibit A-1** as attached hereto and incorporated herein by the reference, (consisting of one page). Consultant agrees to perform the Additional Services as more particularly described in **Exhibit A-1** in accordance with the terms and provisions of the Agreement as amended by this First Amendment. In the event of any conflict or inconsistency

between the provisions of this First Amendment and the Agreement, the provisions of this First Amendment shall control.

3. **Additional Compensation.** To compensate Consultant for the Additional Services, total compensation payable to Consultant under the Agreement is hereby increased by \$8,000.00, plus \$2,000.00 for an Optional Task that will not be performed without prior Authority Approval, for a total of \$10,000.00. For the Additional Services authorized hereunder, Authority will compensate Consultant on a time and material basis in accordance with Consultant's hourly rate of \$160.00 per hour for a maximum of sixty-three (63) hours. Notwithstanding any other provision contained in the Agreement to the contrary, the total amount of compensation for the Additional Services under this First Amendment shall not exceed \$10,000.00 without the Authority's prior express written consent.

4. **Counterparts.** This First Amendment may be executed in counterparts, each of which shall be deemed an original, and all of which together shall be deemed to constitute one and the same document. This First Amendment may be executed and delivered by facsimile signature, PDF - portable document format, or other form of electronic signature.

5. **Effective Date.** This First Amendment shall become effective as of the effective date set forth above when fully executed by the parties hereto.

6. **Reaffirmation of Agreement.** Upon the effective date, the Agreement shall remain in full force and effect in accordance with its terms and provisions as amended by this First Amendment. In the event of a conflict between the terms and provisions of this First Amendment and the Agreement, this First Amendment shall control.

7. **Binding Effect.** This First Amendment shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and permitted assigns.

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

9. **Governing Law.** This First Amendment shall be governed by and construed in accordance with the laws of the State of Colorado.

IN WITNESS WHEREOF, the Parties have executed this First Amendment to the Agreement as of the date set forth above.

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 McCarty, Secretary/Treasurer

Approved as to Form:

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

This Agreement is accepted by:

CONSULTANT:
RG AND ASSOCIATES, LLC, a Colorado limited liability company

By: _____
Rick Gonçalves, President

By execution the signor for Consultant certifies that he or she is authorized to accept and bind Consultant to the terms of this First Amendment.

EXHIBIT A-1

In connection with the Consultant's Agreement to assist the Authority with respect to the operation and maintenance of the Authority's Pollution Reduction Facilities (PRF) within the Cherry Creek State Park, Consultant shall provide the following Services:

Consultant shall inspect PRFs at least once a year and:

1. Observe and photograph PRF's and note any deficiencies or maintenance needs.
2. After major storm events, Consultant shall update or amend Annual PRF Observation Report to assess damage or verify lack of damage resulting from the storm event. A major storm event is defined as having a precipitation intensity equal to or greater than 1" per hour or a storm event that results in damages as reported by CPW or the Corps.
3. Coordinate field visit with CCBWQA Technical Manager, Army Corps of Engineers (Corps), and Colorado Parks and Wildlife (CPW) Staff.
4. Write Annual PRF Observation Report and revise as-needed based on comments from management, TAC, and Board.
5. Identify maintenance projects and prepare budgets for inclusion in CCBWQA's CIP.
6. Prepare Action Item Memo and presentation to TAC and Board to accept report.
7. Transmit accepted report to CPW staff and summarize CPW' maintenance activities according to Agreements between CCBWQA and CPW
8. Coordinate with CCBWQA and CPW staff as-needed.

Optional Task. If more than one (1) major storm event, as defined above, occurs in 2023, and if the Consultant recommends an additional inspection be performed due to possible changes to the PRF Observation Report or CIP budget, and the Authority agrees with the request for an additional storm inspection, the Consultant shall perform and report on the storm inspection at an additional cost, not to exceed \$2,000.00.



ACTION ITEM MEMORANDUM

To: CCBWQA Board of Directors
From: Richard Borchardt, Pollution Abatement Project Manager
Date: March 16, 2023
Subject: Cherry Creek Stream Improvements at Dransfeldt Road – IGA Amendment

Request: The Board authorizes the execution of the amendment to the Intergovernmental Agreement #21-05.04B (IGA Amendment, Attachment 1) for stream improvements on Cherry Creek at Dransfeldt Road (Project). This IGA Amendment includes \$637,070 of additional funding from CCBWQA based on \$570,000 from CCBWQA and \$37,070 of CCBWQA-contributed unspent funds from completed MHFD-led partner projects.

Project: The Project is on Cherry Creek near Dransfeldt Road, just downstream of Cherry Creek at KOA project which was completed in the summer of 2021 (see figure on right). The Project sponsors are CCBWQA, Town of Parker (Parker), and the Mile High Flood District (MHFD), which is the project lead. The proposed stream improvements designed by Muller Engineering benefit the water quality in Cherry Creek and the Cherry Creek Reservoir by reducing bed and bank erosion which immobilizes phosphorus in the adjacent soils. It is estimated that this 0.45-mile-long project will immobilize 41 pounds of phosphorus annually.



Relationship to Upstream Reaches: There is a gap between the previous Cherry Creek at KOA project and the Project which may be constructed or funded by future development to the east of the creek. This gap was considered during the design of the Project, and it was determined to pose a minimal risk to the Project considering that:

- an easement was acquired with the Cherry Creek at KOA project to extend it, adding a drop structure, and performing transitional grading to minimize future degradation in the gap area; and,

- the gap area was historically aggrading, with the completion of the Cherry Creek at KOA project, it is anticipated that the stream will trend towards equilibrium until the development to the east takes place.

Funding: Current market conditions and inflationary pressures have increased project costs about 27.5% from August 2020 to February 2023.¹ CCBWQA’s budget for this year’s contribution to the Project is \$170,000. Due to project cost increases, MHFD and Parker have increased their 2023 funding to the Project, and Parker has requested CCBWQA increase their 2023 participation by \$400,000 (Attachment 2). Additionally, MHFD and Parker are requesting unspent funds totaling \$37,070 held by MHFD from completed MHFD-led partner projects be contributed to the project. These CCBWQA-contributed unspent funds include approximately \$11,016 from Cherry Creek at Norton Farms and \$26,054 from Cherry Creek at Hess Road. The previously contributed funding level for the Project by all partners is \$3,340,000, which includes a prior contribution of \$230,000 from CCBWQA. The IGA Amendment estimates the total project cost of about \$7,274,000. Table 1 shows the Summary of Project Funding as described above and included in the IGA Amendment.

Table 1. Summary of Project Expenditures

Funding Source	Project Sponsor %	Previously Contributed	Additional MHFD Special Funds Transfer	Additional Contribution Request	Total Contribution
MHFD	15.70%	\$360,000	\$82,010	\$700,000	\$1,142,010
Parker	72.79%	\$2,750,000	\$44,951	\$2,500,000	\$5,294,951
CCBWQA	11.51%	\$230,000	\$37,070	\$570,000	\$837,070
Total	100.00%	\$3,340,000	\$164,031	\$3,770,000	\$7,274,031

Based on cost-adjustments considering inflation, the relative cost per pound of phosphorus immobilized by the Project, and the fact that the contribution request is well below 25% of the project, R2R Engineers concludes that the funding request is reasonable. In terms of cost per pound of phosphorus immobilized with cost sharing, this Project is estimated to cost approximately \$1,301 per pound, whereas analysis of six recent projects shows an average cost of \$1,590 per pound.

TAC Review: TAC considered Parker’s request, information on project cost increases, and the water quality benefit analysis. TAC unanimously recommended that the Board authorize the IGA Amendment with an expenditure of \$570,000 and a MHFD Special Funds Transfer of about \$37,000, with Parker’s TAC representative abstaining.

Budget: CCBWQA’s funding of \$170,000 is included in the 2023 approved budget for the Project. The Authority’s 2023 CIP budget also includes \$2,111,000 for East Shade Shelters, Cherry Creek at Arapahoe (R 3-4), and McMurdo Gulch projects. It is likely that these projects will be delayed past 2023 due to partner funding constraints and/or revised schedules; therefore, this 2023 funding could be reallocated to cover the additional \$400,000 in CCBWQA funding requested by Parker without a 2023 Pollution Abatement Fund budget increase.

Motion: I move that the Board authorize CCBWQA to execute the IGA Amendment and an expenditure of \$570,000 and a MHFD Special Funds Transfer of about \$37,070 in CCBWQA unused funds from the completed projects of Cherry Creek at Norton Farms and Cherry Creek at Hess Road.

¹ Engineering News-Record, Building Cost Index. Additionally, a recent cost analysis completed by Naranjo Civil Constructors for MHFD showed cost increases from 2020 to 2022 at 35% for rock and 28% for concrete.

Attachments:

Attachment 1 Draft IGA

Attachment 2 Town of Parker's Additional Funding Request



Photo 1 - Cherry Creek at upstream end of Dransfeldt Project



Photo 2 - Cherry Creek near future Dransfeldt Road

SECOND AMENDMENT TO
AGREEMENT REGARDING DESIGN AND CONSTRUCTION OF
DRAINAGE AND FLOOD CONTROL IMPROVEMENTS FOR
CHERRY CREEK AT DRANSFELDT ROAD
TOWN OF PARKER

Agreement No. 21-05.04B
Project No. 108515

THIS SECOND AMENDMENT TO AGREEMENT (hereinafter called "SECOND AMENDMENT"), by and between URBAN DRAINAGE AND FLOOD CONTROL DISTRICT D/B/A MILE HIGH FLOOD DISTRICT (hereinafter called "DISTRICT") and TOWN OF PARKER (hereinafter called "TOWN"), and CHERRY CREEK BASIN WATER QUALITY AUTHORITY (hereinafter called "CCBWQA") and collectively known as "PARTIES";

WITNESSETH:

WHEREAS, PARTIES have entered into "Agreement Regarding Design and Construction of Drainage and Flood Control Improvements for Cherry Creek at Dransfeldt Road" (Agreement No. 21- 05.04) dated June 23, 2021, as amended by First Amendment dated October 13, 2022, (hereinafter collectively called "AGREEMENT"); and

WHEREAS, PARTIES now desire to proceed with design and construction of drainage and flood control improvements for Cherry Creek at Dransfeldt Road (hereinafter called "PROJECT"); and

WHEREAS, PARTIES desire to increase the level of funding by \$3,934,031.06 which includes a transfer of \$10,361.40 from Twenty Mile Detention, Agreement 99-04.01 as Amended, a transfer of \$3,286.39 from Crown Point Detention on Cottonwood Creek at E-470 Agreement 15-02.04, a transfer of \$49,179.47 from Cherry Creek at Norton Farms Agreement 13-01.40 as Amended, a transfer of \$101,203.80 from Cherry Creek at Hess Road Agreement 10-10.05 as Amended, and an additional contribution of \$3,770,000.00 in new capital funds; and

WHEREAS, Douglas County was party to the Cherry Creek at Hess Road Agreement 10-10.05 as amended but Douglas County is not Party to this Agreement. The Douglas County share of the remaining funds is not being transferred to the PROJECT and shall be refunded to Douglas County.

WHEREAS, DISTRICT's Board of Directors has authorized additional DISTRICT financial participation for PROJECT (Resolution No. 10, Series of 2023 and Resolution No. _____, Series of 2023); and

WHEREAS, the Town Council of TOWN, Board of Directors of CCBWQA, and Board of Directors of DISTRICT have authorized, by appropriation or resolution their respective shares of the PROJECT costs as defined in paragraph 4.C below.

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

1. Paragraph 4. PROJECT COSTS AND ALLOCATION OF COSTS is deleted and replaced as follows:

4. PROJECT COSTS AND ALLOCATION OF COSTS

A. PARTIES agree that for the purposes of this AGREEMENT, PROJECT costs shall consist of and be limited to the following:

1. Final design services;
2. Construction of improvements;
3. Contingencies mutually agreeable to PARTIES.

B. It is understood that PROJECT costs as defined above are not to exceed \$7,274,031.06 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	\$ 800,000.00	\$ 440,000
2. Construction	\$ 6,224,031.06	\$ 2,850,000
3. Contingency	\$ 250,000.00	\$ 50,000
Grand Total	\$ 7,274,031.06	\$ 3,340,000

C. At the request of TOWN and CCBWQA, the following MHFD, TOWN and CCBWQA funds may be transferred to PROJECT from a separate special fund held by DISTRICT:

Project Name	Twenty Mile Detention	Crown Pont Detention	Cherry Creek at Norton Farms	Cherry Creek at Hess Road	Totals
Account No	4104	5302	5614	5608	
Agreement No	99-04.01 A	15-02.04	13-01.40 C	10-10.05 C	
Total Amount	\$10,361.40	\$3286.39	\$49,179.47	\$104,215.63	
Agreement DISTRICT %	50.00%	50.00%	50.00%	48.55%	
DISTRICT \$	\$5,180.70	\$1,643.19	\$24,589.74	\$50,596.69	\$82,010.32
Agreement TOWN %	50.00%	50.00%	27.60%	23.56%	
TOWN \$	\$5,180.70	\$1,643.20	\$13,573.53	\$24,553.20	\$44,950.63
Agreement CCBWQA %	0.00%	0.00%	22.40%	25.00%	
CCBWQA \$	\$-	\$-	\$11,016.20	\$26,053.91	\$37,070.11
Agreement Douglas County %	0%	0%	0%	2.89%	
Douglas County \$	-	-	-	\$ 3,011.83**	**
Total Special Funds Transfer					\$ 164,031.06

** Douglas County share of Cherry Creek at Hess Road Agreement 10-10.05 as amended is not part of the Special Fund Transfer and is reflected for transparency only. Douglas County share of funds will be refunded by DISTRICT.

D. 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	15.70%	\$360,000	\$ 82,010.32	\$700,000	\$1,142,010.32
TOWN	72.79%	\$2,750,000	\$ 44,950.63	\$2,500,000	\$5,294,950.63
CCBWQA	11.51%	\$230,000	\$37,070.11	\$570,000	\$837,070.11
TOTAL	100.00%	\$3,340,000	\$ 164,031.06	\$3,770,000	\$7,274,031.06

E. DISTRICT Acknowledges that (i) CCBWQA does not by this Agreement irrevocably pledge present cash reserves for payments in future fiscal years, and (ii) It is understood and agreed that notwithstanding any other provision contained herein to the contrary, any additional contribution obligation of CCBWQA hereunder, whether direct or contingent, shall extend only to funds duly and lawfully appropriated and encumbered by the Board of Directors of CCBWQA for the purposes of the Agreement, and paid into the Treasury of CCBWQA, and shall under no circumstances exceed \$837,070.11 without CCBWQA's prior express written consent.

2. Paragraph 5. MANAGEMENT OF FINANCES is deleted 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 DISTRICT approval.

Payment of the balance of each PARTY's full share (TOWN - \$5,294,950.63; CCBWQA - \$837,070.11; DISTRICT - \$1,142,010.32) shall, to the extent not already paid, be made to DISTRICT subsequent to execution of this AGREEMENT and within 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 TOWN 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).

Within one 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 TOWN request, TOWN 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, PARTIES hereto have caused this SECOND 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 _____

Checked By

Title Executive Director _____

Date _____

TOWN OF PARKER

Jeff Toborg, Mayor

Date _____

ATTEST:

Town Clerk's Office

APPROVED AS TO FORM AND SUFFICIENCY:

Town Attorney's Office

CHERRY
CREEK BASIN
WATER
QUALITY
AUTHORITY

CCBWQA Checked by

By

Name Joshua Rivero

Title CCBWQA Chairman

Date

Attest: John McCarty, CCBWQA
Secretary

APPROVED AS TO FORM:

Timothy J. Flynn, General Counsel for CCBWQA



Your kind of place.

MEMORANDUM

TO: Cherry Creek Basin Water Quality Authority
FROM: Alex Mestdagh, Engineering Services Manager Town of Parker
DATE: February 24, 2023
SUBJECT: Funding Request for Cherry Creek at Dransfeldt Drainage Improvement Project

This memorandum is in regard to a drainageway improvement project along Cherry Creek within the Town of Parker, approximately 9 miles upstream of Cherry Creek Reservoir. This reach has been identified as unstable with various locations of bank erosion, receding surface flows, a disconnection of the floodplain and die-back of vegetation. A portion of the reach also requires a minor realignment to accommodate the hydraulics of a future roadway crossing. This project proposes the installation of channel improvements such as boulder drop and riffle structures, hard and soft bank stabilization, redefining the active channel, wetland reestablishment, and riparian enhancement. More than 50,000 wetland plugs and willow stakes are proposed for the replacement of damage wetlands, creation of new wetlands, and enhancement of the riparian corridor.

The Town of Parker, the Mile High Flood District (MHFD), and Cherry Creek Basin Water Quality Authority (Basin Authority) entered into an intergovernmental agreement (IGA) on June 7th, 2021 to fund the design of the project and amended the agreement on December 5th, 2022 to fund a portion the construction costs for the project. It is intended that this IGA be amended again in 2023 to fund the remaining portion of construction. This proposed amendment would result in the following final contribution amounts to the project: Town of Parker - \$5,294,865.82 (77.03%), MHFD - \$1,141,855.58 (16.61%), and Basin Authority – \$437,000.16 (6.36%).

Due to abnormally high inflation of construction material costs, it is anticipated that this project will have a budget shortfall of approximately \$400,000. To illustrate the scale of material inflation in the last year, the cost inflation of diesel fuel, concrete, and rock have averaged somewhere between 5%-25% year-over-year between 2015 and 2021. Between 2021 and 2022 the price of these materials has jumped between a range of 25%-85% in a single year, heavily impacting the cost of moving earth, rebuilding trail, and installing stabilization measures.

The Town of Parker and Mile High Flood District have exhausted all available budgets for their 2023 contributions. The Town of Parker would like to request that the Authority consider additional contributions to help complete

funding for construction. This project is currently being funded by the Authority at a low participation rate among projects within the basin, and additional contributions by the Authority would still leave this project in line with typical participation rates. This project is one in a series of stabilization projects on Cherry Creek that the Town of Parker has planned, and we feel these projects will result in a significant benefit to the water quality of Cherry Creek and the Cherry Creek Reservoir. We respectfully request the TAC and Board's consideration of this request.

Thank you for your sincere consideration,

A handwritten signature in black ink, appearing to read 'Alex Mestdagh', written in a cursive style.

Alex Mestdagh, P.E.

Engineering Services Manager, Town of Parker



ACTION ITEM MEMORANDUM

To: CCBWQA Board of Directors
From: Erin Stewart, LRE Water
Date: March 6, 2023
Subject: WY 2022 CCBWQA Water Quality Monitoring Report

Request: The CCBWQA Board of Directors accepts the [WY 2022 - Cherry Creek Basin Water Quality Authority Monitoring Report](#).

Background: The CCBWQA water quality monitoring consultant, LRE Water, generates a water quality monitoring report annually which provides a summary of the water quality monitoring results from each water year based on the purpose and objectives set forth in the [CCBWQA Routine Sampling and Analysis Plan/ Quality Assurance Project Plan \(SAP/ QAPP\)](#). The monitoring report addresses the monitoring and reporting requirements in Reg. 72.

Motion: The CCBWQA Board of Directors moves to accept the [WY 2022 - Cherry Creek Basin Water Quality Authority Monitoring Report](#).



ACTION ITEM MEMORANDUM

To: CCBWQA Board of Directors
From: Jane Clary, Wright Water Engineers and Carolyn Nobel, LRE Water
Date: March 6, 2023
Subject: 2022 CCBWQA Annual Report on Activities

Request: The CCBWQA Board of Directors accepts the [2022 Cherry Creek Basin Water Quality Authority Annual Report on Activities](#).

Background: LRE Water has worked with the CCBWQA members, staff, and other stakeholders to create the 2022 Annual Report on Activities which is located on the CCBWQA's data portal. In addition, an executive summary of the activities was provided to highlight a few key factors from the monitoring program, watershed projects, and CCBWQA partner activities in 2022. This report is compiled as a benefit to the CCBWQA and to comply with the reporting requirements set forth in Reg. 72.

Motion: The CCBWQA Board of Directors moves to accept the [2022 Cherry Creek Basin Water Quality Authority Annual Report on Activities](#) and to submit a letter to the Water Quality Control Commission, by March 31st, 2023.



MEMORANDUM

To: CCBWQA Board
From: Jane Clary, Technical Manager
Date: March 10, 2023
Subject: Modeling and Watershed Committee Direction

Background:

At the March 2, 2023 meeting, the TAC reviewed and discussed the attached TAC Action Item Memo dated February 28, 2023.

The TAC passed a motion to form a Modeling Subcommittee and a Watershed Plan Subcommittee and requested participation of two or more Board members on each Subcommittee along with all interested TAC Members.

As of March 10, 2023, the following TAC members have expressed interest in participating:

Modeling Subcommittee:

- Ryan Adrian, Douglas County
- Lisa Knerr, Arapahoe County
- Jon Erickson, Colorado Parks and Wildlife
- Jason Trujillo, Cherry Creek State Park

Watershed Plan Subcommittee

- Ryan Adrian, Douglas County
- Ashley Byerley, SEMSWA
- Steven Chevalier, Arapahoe County Public Health
- Lisa Knerr, Arapahoe County
- Alex Mestdagh, Town of Parker
- Casey Davenport, Cherry Creek Stewardship Partners
- Caitlin Gappa, Douglas County Health Department
- Jon Erickson, Colorado Parks and Wildlife
- Jason Trujillo, Cherry Creek State Park
- Jim Watt, Mile High Flood District

Next Steps:

CCBWQA's Administrative Assistant, Val Endyk, will email Board members to request interest in participation on the TAC Modeling Subcommittee and the TAC Watershed Plan Subcommittee.



To: CCBWQA TAC
From: Jane Clary, Technical Manager
Date: February 28, 2023
Subject: 2023 Subcommittees

Request: That the TAC form two subcommittees to work with Staff to 1) identify next steps for both watershed and reservoir models, and 2) provide direction and input on a watershed plan update. These committees will be known as the Modeling Subcommittee and the Watershed Plan Subcommittee. Additionally, Board member participation on these subcommittees is requested.¹

Background: CCBWQA has completed watershed and reservoir models during the past five years, as well as a watershed plan in 2012. Additional action is needed regarding the models and the watershed plan. Direction on these issues is better suited to more in-depth, smaller group interactive discussion that can occur in subcommittees. Recommendations from these subcommittees can then be directed back through the TAC and Board for further action. Both of these subcommittees would provide direction and input to CCBWQA staff and consultants to ensure that the direction taken on models and the watershed plan is consistent with CCBWQA objectives and priorities.

Key [technical references](#) for the subject matter for these committees are included in the Board Binder.

See more information on [committees](#) in the Board Binder.

Topics to Be Addressed by Each Subcommittee:

Modeling Subcommittee

- Review RESPEC's recommendations for additional model runs and other potential model runs.
- Prepare technical direction for watershed model runs.
- Review necessary steps for watershed-reservoir model linkage to ensure future reservoir model runs are supported.
- Identify reservoir models runs requested for late 2023 or 2024.
- Other items as identified by the Subcommittee, TAC or Board.

Watershed Subcommittee

- Review existing watershed plan and develop an outline for a watershed plan update.
- Identify missing content that needs to be developed to support update to the watershed plan in 2024.
- Provide feedback to staff on initial work on the watershed plan.
- Participate in the September 2023 Watershed Plan Workshop.
- Other items as identified by the Subcommittee, TAC or Board.

Note: initial work on the watershed plan update has been completed by staff.

Process and Time Commitment: Two to four meetings of each subcommittee are envisioned for 2023. The meetings may be held virtually, in-person or hybrid, depending on the preference of the subcommittee members.

Budget: Staff participation and support of these committees is covered under the approved budget for year 2023.

Committee Members: To be determined based on TAC and Board interest and expertise.

Proposed Motion: The CCBWQA TAC moves to form a Models Subcommittee and a Watershed Plan Subcommittee and requests participation of two Board members on each Subcommittee.

Next Steps: Identify TAC and Board participants on each subcommittee, refine committee objectives and develop meeting schedule. The Technical Manager and Administrative Assistant will provide facilitation and administrative support for the subcommittees. CCBWQA staff and contractor support will vary depending on the subject matter of the subcommittee.

¹ These two subcommittee topics were supported in discussion at the February Board meeting. Following the Board meeting, additional input from several TAC, Board and TAC members has resulted in a recommendation that these committees be formed as TAC Subcommittees with Board participation, rather than vice versa due to the technical subject matter. At the March Board meeting, this approach will be clarified.

The Board also provided direction to phase committees/subcommittees over time (i.e., don't start them up until they are needed). An additional Board Committee or TAC Subcommittee may be requested later this year for input on the Capital Improvements Program.



MEMORANDUM

To: CCBWQA Board of Directors
From: Jessica DiToro, PE, LRE Water and Jane Clary, Wright Water Engineers
Date: March 16, 2023
Subject: Lake Nutrients WQCC Rulemaking Hearing Update (No Action Required)

Issue Update: CCBWQA remains a party to the Lakes Nutrients Rulemaking hearing. CCBWQA requested a delayed effective date of 12/31/2025 to allow time to develop site specific standards. Although the Water Quality Control Division (Division) originally opposed this request, at the March 7, 2023 Prehearing Conference, the Division proposed a major change in direction for standards adoption that would result in a statewide delayed effective date of 12/31/2027 (with some nuances, Attachment 1). This change in direction effectively addresses CCBWQA's request. CCBWQA has followed up with the Division staff to request that CCBWQA's Statement of Basis of Purpose language regarding development of site specific standards continue to be included in Regulation 38 with revised dates aligning with the Division's revised proposal. The CCBWQA's Regulation 38 Special Board Committee has been informed of and supported this communication with the Division.

As additional background since the last Board meeting, on February 15, 2023, [Rebuttal Statements](#) (Rebuttals) were due for the WQCC [Lake Nutrients Criteria](#) (RMH). Staff has reviewed the Rebuttals by other parties for any discussion regarding Cherry Creek Reservoir and/or requests for delayed effective dates/site-specific standards and identified four Rebuttals as discussed in the March 2, 2023 Update Memorandum to the CCBWQA Technical Advisory Committee, Attachment 1.

The RMH is scheduled for April 10-11, 2023. This is the last Board meeting before the RMH. The RMH deadlines overlaid with the CCBWQA meetings schedule is provided in Attachment 2.

Next Steps: The RMH is scheduled for April 10-11, 2023. The CCBWQA was given 7 minutes to present orally to the WQCC. A brief Powerpoint will be prepared to support hearing testimony including information previously submitted to the CWQCC in CCBWQA's Responsive Prehearing Statement and Rebuttal Statement. The Powerpoint will be shared with the Regulation 38 Special Board Committee prior to the hearing.

From: [Jane Clary](#)
To: "Manager"
Subject: FW: Nutrients Rulemaking: update on WQCD revised approach
Date: Friday, March 10, 2023 1:05:00 PM
Attachments: [image001.png](#)

From: Rebecca Fischer <Rebecca.Fischer@coag.gov>
Sent: Friday, March 10, 2023 11:09 AM
To: cdphe CDPHE-Water Quality Commission - CDPHE <cdphe.wqcc@state.co.us>

Subject: Nutrients Rulemaking: update on WQCD revised approach

Dear April 2023 Lakes Nutrients Rulemaking Hearing Parties:

The division sent an email on March 6, 2023 regarding plans to adjust its nutrients proposal based on feedback from several parties in responsive and rebuttal statements. At that time the division provided general information regarding this modification to its proposed revised lakes nutrient criteria approach, as summarized below. The division has been working on a revised regulatory mark-up and SBP to reflect this changed approach and plans on sharing options to address this approach with all parties on Tuesday March 14th via email. We will also set up some time to discuss these options with anyone interested on Thursday March 16th at 4PM. We will share the google meet login information next Tuesday. Other important upcoming dates include negotiations cutoff on March 16th and the consolidated proposal and revised statement of basis and purpose language on March 30th.

As a reminder here is the summary of the adjusted proposal that has been shared.

- The division recommends adopting the proposed lakes nutrients criteria for TN and TP in Regulation No. 31 as proposed.
- The division now recommends that the revised TN and TP standards for lakes and reservoirs would not go into effect until 12/31/2027 in Regulations Nos. 32-38 for any new segments (i.e., those below qualified dischargers). For the segments above qualified dischargers that already have TP standards, the division continues to propose those TP standards be updated and TN standards be applied. Beginning 12/31/2027, the revised TN and TP standards will be effective statewide on **all** lakes and reservoirs with Aquatic Life and/or Recreation uses.
- The division continues to recommend statewide adoption of chlorophyll *a* standards for lakes, reservoirs, rivers, and streams to protect Aquatic Life, Recreation, and/or DUWS uses.
- Prior to 2027, the division will also recommend that the WQCC schedule an informational hearing regarding implementation of nutrient standards for both lakes/reservoirs and streams/rivers in 2027 to discuss results of a stakeholders process to explore regulatory and feasibility options for implementation of nutrient and other standards. We would propose including a statement to this effect in the statement of basis.

The division hopes that the modification to its proposal and timeline helps to resolve outstanding issues in advance of the rulemaking hearing and is interested in hearing parties' feedback on these changes to its proposal. The division encourages parties to reach out to

division staff with any questions or comments prior to the negotiations cutoff deadline on March 16th. We look forward to continuing to work with you all to look for ways to resolve additional outstanding issues before the rulemaking hearing on April 10th.

Thank you,

Rebecca Fischer, counsel for the division, and the division team

Rebecca Fischer
Assistant Attorney General
Water Quality & Hazardous and Solid Waste Units
Pronouns: she, her, hers



COLORADO
Department of Law
Attorney General Phil Weiser

Office: (720) 508-6265 | Cell: (406) 698-1489 | Rebecca.Fischer@coag.gov

The statements and opinions in this email do not represent the statements and opinions of the Attorney General.

Memorandum

To: CCBWQA Technical Advisory Committee
From: Jessica DiToro, PE, and Erin Stewart, LRE Water
Reviewed by: Jane Clary, Wright Water Engineers
Date: March 2, 2023
Subject: Lake Nutrients Criteria Rulemaking Hearing

On February 15, 2023, [Rebuttal Statements](#) (Rebuttals) were due for the Water Quality Control Commission (WQCC) [Lake Nutrients Criteria Rulemaking Hearing](#) (RMH). Staff has reviewed the Rebuttals by other parties for any discussion regarding Cherry Creek Reservoir and/or requests for delayed effective dates/site-specific standards and identified four Rebuttals as discussed below:

Water Quality Control Division (WQCD): The WQCD continues to not support CCBWQA’s request for a delayed effective date. The WQCD does agree that information to support appropriate and protective site-specific standards proposal could be developed for consideration by the 2025 Regulation 38 RMH. However, the WQCD goes on to state that based upon current data, the existing quality of Cherry Creek Reservoir for all nutrient parameters would exceed any use-based standard that would be applied, and implementation of nitrogen and phosphorus controls across sources in the watershed would still be necessary. The WQCD also does not see the need for a delayed effective date, as total maximum daily loads for impairments identified as a result of this RMH will not be developed until after 2032 and discharge permits that fall within the Basin will not be renewed until after 2025.

- In its Rebuttal, WQCD did not address CCBWQA’s concerns regarding statutory constraints in regard to affecting CCBWQA’s ability to propose a site-specific standard(s) if it will be perceived as not being “... *clearly consistent with improving, protecting, and preserving such water quality*”. CCBWQA also continues to believe that until phosphorus concentrations are significantly controlled, reducing nitrogen levels in the watershed to meet total nitrogen (TN) standards as proposed by the Division could have unintended consequences of further exacerbating conditions favorable to cyanobacteria.

Colorado Parks and Wildlife (CPW): CPW stated that they do not oppose the CCBWQA’s delayed effective date request, but would not support any extension to the delayed effective date past the 2025 Regulation 38 RMH. CPW disagreed with “many of the statements and assertions made by CCBWQA in its Responsive Prehearing Statement” (RPHS), including that “there has been significant progress in reducing nutrient concentrations in Cherry Creek Reservoir” and “that it is inadvisable to control TN, since TN is currently the primary nutrient limiting algal growth in Cherry Creek Reservoir. Additionally, CPW does not agree that reducing TN will necessarily lead to more toxin production and could lead to more toxin production”.

- Staff believes that CPW took a comment made in the CCBWQA RPHS in regard to “*significant progress in reducing nutrient concentrations*” out of context. CCBWQA made this comment in regard to the progress and actions taken in the watershed to reduce nutrient concentrations in the watershed and inflows to the Reservoir. Instead, it appears CPW misinterpreted this statement to be in regard to the nutrient concentrations in Cherry Creek Reservoir and in their Rebuttal provided historical nutrient concentrations in Chery Creek Reservoir (using an incomplete data set missing data from 2009-2012). Also, CPW did not address the data supporting the claims in CCBWQA’s RPHS Section II (2) and (3) regarding the significant nutrient controls and reductions for point sources and advanced stormwater and non-point source controls being implemented in the basin under Control Regulation 72.
- CPW states that it “does not agree that it is inadvisable to Control TN” which misrepresents the statements that were actually made in the CCBWQA RPHS, which are: “Until phosphorus concentrations are significantly

controlled, reducing nitrogen levels in the watershed to meet the TN standards are proposed by the Division could have an unintended consequence of further exacerbating conditions favorable to cyanobacteria.”

- CPW also states that they do not agree “that reducing TN will necessarily lead to more toxin production and could lead to more toxin production” which the CCBWQA did not state in its RPHS. In addition, the data that CPW references in its Rebuttal in regard to nitrogen-limitation and toxin production does not represent Cherry Creek Reservoir well since the CCBQA monitoring data indicates that elevated cyanobacteria biovolumes, high chlorophyll a concentrations, and the associated cautions/closures to recreation resulting from accumulated scums and/or toxins more commonly correspond to nitrogen-fixing cyanobacteria such as *Dolichospermum* and *Aphanizomenon*, as opposed to *Microcystis* and *Planktothrix*, as referenced.

Environmental Protection Agency (EPA): The EPA stated that they did not see any compelling reason or need to delay the implementation of the standards in Cherry Creek Reservoir. In the EPA’s opinion, setting standards now would not preclude the CCBWQA’s efforts to develop site-specific standards either *more or less stringent* for the 2025 Regulation 38 RMH. The EPA also reiterated its statement from their RPHS regarding how the WQCD’s TN and total phosphorus (TP) criteria proposal for Cherry Creek Reservoir were not based on the site-specific chlorophyll a standard that is currently in effect. Ultimately, the EPA supports the application of standards to Cherry Creek Reservoir at this current RMH, with the development and adoption of site-specific standards at a future date, if shown to be appropriate.

- In its Rebuttal EPA did not address CCBWQA’s concerns regarding statutory constraints in regard to limitations on proposing a site-specific standard(s) if it will be perceived as not being “... *clearly consistent with improving, protecting, and preserving such water quality.*”

City of Aurora (Aurora) and Parker Water and Sanitation District (PWSD): Aurora and PWSD have requested that the WQCC not adopt any standards in this RMH and instead adopt a delayed effective date until 2027 (when TN and TP standards will be applied to all lakes and reservoirs statewide) to allow parties to develop site-specific standards for WQCC consideration before table value standards become effective. In their Rebuttal, Aurora and PWSD provided possible Statement of Basis and Purpose Language (Attachment A). Aurora and PWSD, in the context of Rueter-Hess Reservoir, describe the uniqueness of the Cherry Creek Basin (i.e., the existence of Control Regulation 72, the high natural background TP concentrations, the significant nutrient controls already in place through nonpoint and stormwater controls, and the low discharge limits already being achieved by the Basin’s wastewater treatment facilities, etc.).

- On February 14, 2023, Aurora and PWSD’s legal counsel reached out to CCBWQA staff requesting CCBWQA support for Aurora and PWSD’s proposal in the CCBWQA Rebuttal. Because the CCBWQA Board had already approved the Rebuttal for submission to the WQCC and the Rebuttal was due on February 15, 2023, CCBWQA was not able to consider last minute changes to its Rebuttal. However, moving forward, there may be potential for negotiations (cut off March 16, 2023) with the WQCD, either jointly or independently of Aurora and PWSD.

Additional Observations:

- The Chatfield Watershed Authority (Phosphorus Control Regulation 73) and Summit Water Quality Authority (Phosphorus Control Regulation 71) both expressed concerns and/or opposed the adoption of these criteria at this RMH in their respective Rebuttals.
- Arapahoe County Water and Wastewater Authority, East Cherry Creek Valley Water and Sanitation District, and United Water Sanitation District submitted a joint Rebuttal formally opposing the proposed TN and TP criteria at this RMH.

Next Steps: The RMH is scheduled for April 10-11, 2023. Staff anticipates that CCBWQA will be given 7 minutes to present orally to the WQCC. The amount of time we will be allowed to present will be determined at the Prehearing Conference scheduled for March 7, 2023. Staff will prepare a presentation for the Board to approve at its March 16, 2023 meeting.

Lakes Nutrients Criteria (Regulations 31-38) RMH Schedule + CCBWQA Meeting Schedule		
Event	Date	Activity
Nutrient Town Hall	May 2 nd	Proposed criteria released by WQCD
May TAC	May 5 th	1 st discussion related to draft criteria at TAC level
May Board	May 19 th	1 st discussion related to draft criteria at Board level
June TAC	June 2 nd	2 nd discussion related to draft criteria at TAC level
June Board	June 16 th	2 nd discussion related to draft criteria at Board level
July TAC	July 7 th	3 rd discussion related to draft criteria at TAC level – Motion for Party Status
July Board	July 21 st	3 rd discussion related to draft criteria at Board level – Motion for Party Status
PPHS	August 3 rd	Review WQCD's PPHS
August TAC	August 4 th	4 th discussion related to draft criteria at TAC level – Motion for RPHS
Party Status Requests	August 17 th	Submit Party Status Request
August Board	August 18 th	4 th discussion related to draft criteria at Board level – Motion for RPHS
September TAC	September 1 st	5 th discussion related to draft criteria at TAC level – Discuss Rebuttal
September Board	September 15 th	5 th discussion related to draft criteria at Board level – Motion for Rebuttal if needed
Supplemental PPHS	October 5 th	Review WQCD's Supplemental PPHS
October TAC	October 6 th	6 th discussion related to draft criteria at TAC level – Update on status
October Board	October 20 th	6 th discussion related to draft criteria at Board level – Update on status
November TAC	November 3 rd	7 th discussion related to draft criteria at TAC level – Discuss RPHS
November Board	November 17 th	7 th discussion related to draft criteria at Board level – Motion for RPHS
December TAC	December 1 st	8 th discussion related to draft criteria at TAC level – Discuss Board Subcommittee
December Board	December 15 th	8 th discussion related to draft criteria at Board level – Motion for Board Subcommittee
RPHS	December 21 st	Submit Supplemental RPHS – TBD + Review other parties' RPHSs
January TAC	January 5 th	9 th discussion related to draft criteria at TAC level – Discuss Rebuttals
January Board	January 19 th	9 th discussion related to draft criteria at Board level – Motion for Rebuttals(?)
February TAC	February 2 nd	10 th discussion related to draft criteria at TAC level – Update on status
Rebuttals	February 15 th	Submit Rebuttal Statement – TBD + Review other parties' Rebuttals
February Board	February 16 th	10 th discussion related to draft criteria at Board level – Update on status
Motions	February 22 nd	TBD
Complex Outstanding Issues Index	March 1 st	Review Index
March TAC	March 2 nd	11 th discussion related to draft criteria at TAC level – Discuss RMH Presentation
Prehearing Conference	March 7 th	Participate (virtually) in conference to maintain Party Status
March Board	March 16th	11th discussion related to draft criteria at Board level – Motion for RMH Presentation
Negotiation Cutoff	March 16th	Final negotiations with WQCD and other parties today
Consolidated Proposal	March 30th	Review Proposal
Cost Benefit Analysis	March 31st	Review Cost Benefit Analysis
Regulatory Analysis	April 5th	Review Regulatory Analysis
April TAC	April 6th	12th discussion related to draft criteria at TAC level – Update on status
RMH	April 10th	Participate (virtually) in RMH
April Board	April 20th	Update on RMH outcome
May TAC	May 4th	Update on RMH outcome

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
2023 Capital Project Status Report
March 10, 2023

RESERVOIR PROJECTS

1. East Shade Shelters Phase III and Tower Loop Phase II Shoreline Stabilization (CCB-17.5 and CCB-17.7)
 - a. Description: These projects were identified in 2014 through the annual inspection. The Tower Loop Phase II connects to the Phase I project and extends shoreline protection 570 feet to the southeast towards Dixon Grove. The East Shade Shelters Phase III starts on the north end of the Shade Structure and goes 400-feet to the south.
 - b. Status: Consultant selection is scheduled for the 1st quarter. A consultant selection committee will be set in February (1/29/21). At the February TAC meeting Jason Trujillo, Jon Erickson, Lanae Raymond, Bill Ruzzo were interested in serving on the consultant selection committee (2/11/21). This selection committee was discussed at the 3/18/21 Board Meeting, and no further members were added. The Request for Proposals (RFP) has been posted on BidNet and Proposals are due 04/21/21 (3/25/21). The pre-proposal meeting was held on 4/7/21. 5 proposals were received on 4/28/21; the selection committee is reviewing them. Interviews were held and a selection is being brought to the May Board meeting (5/14/21). Board authorized negotiations with RESPEC (5/27/21). Agreement has been executed with RESPEC (10/15/21). Field Survey of project areas and topographic mapping is underway (12/30/21). A design kickoff meeting was held on 4/22/22. A design sprint workshop was held on 7/12/22 which included a site visit and evaluation of alternatives. RESPEC is developing a recommended alternative (9/8/22). RESPEC provided updated project costs for budgeting (10/13/22). The 30% submittal was received on 11/16/22 and is under review. CCBWQA provided comments on 30% review on 1/17/23; a value engineering effort is recommended as the project costs exceed the budget. The value engineering meeting was held on 2/24/23.

STREAM RECLAMATION PROJECTS

1. Cherry Creek Stream Reclamation at Arapahoe Road aka Reaches 3 and 4 (CCB-5.14C)
 - a. Description: This project continues the work on Cherry Creek by CCBWQA, MHFD, and local partners. It ties into the previous stream reclamation projects of Cherry Creek Eco Park to Soccer Fields (CCB-5.14A) and Cherry Creek at Valley Country Club (CCB-5.14B). The 5,167 Linear Feet of stream reclamation reduces bed and bank erosion immobilizing approximately 88 pounds of phosphorus annually. The project is anticipated to be funded over several years and likely be broken into phases.
 - b. Status: In 2021, an IGA was executed between CCBWQA, MHFD, City of Aurora, and SEMSWA to begin this work. IGA Amendment that brings in 2022 funding is under review (5/13/22). Board authorized IGA Amendment for 2022 funding on 7/21/22 (8/12/22). IGA Amendment has been revised to show Aurora's lower participation; CCBWQA's participation was lowered accordingly to meet 25% partner project level; revised IGA Amendment received TAC recommendation and is being taken to Board for their consideration in October (10/13/22). Board authorized the IGA Amendment for 2022 funding at their 10/22/22 meeting. It appears that CCBWQA's 2023 participation will be reduced as a result of less partner funding available for this project (2/24/23).
2. Cherry Creek Stream Reclamation – Upstream of Scott Road (CCB-5.17)
 - a. Description: Design and construction of stream reclamation is in partnership with Douglas County and MHFD. It improves 4,100 feet of Cherry Creek and is located upstream of Scott Road.
 - b. Status: IGA was approved by the Board at their April 2020 meeting. Muller had been selected as consultant, and design scope of work is being prepared. Kickoff meeting was

held on 12/11/20; a follow-up field visit will be scheduled for early 2021. Site visit was held on 1/29/21. Conceptual design is complete, negotiations are underway to contract for 60% design (4/8/21). Muller is working on alternatives (4/30/21). Muller is working on preliminary design and an IGA Amendment to bring in additional 2021 funding from Douglas County is being brought to the Board in October (10/15/21); IGA Amendment has been executed (11/11/21). Muller is preparing 60% Design Submittal (1/28/22). Muller submitted 60% Design on 2/2/22; comments have been provided on 60% Design Submittal (3/10/22). IGA Amendment bringing in 2022 funding is scheduled for TAC and Board consideration in June (5/27/22). IGA Amendment was authorized at the June 16th Board Meeting (6/30/22).

3. Cherry Creek Stream Reclamation at Dransfeldt (CCB-5.17.1B)
 - a. Description: Design and construction of stream reclamation is in partnership with Town of Parker and MHFD. It improves 2,400 feet of Cherry Creek near the future location of Dransfeldt bridge which is just downstream of the Cherry Creek at KOA project.
 - b. Status: Initial scoping has begun, and a partners meeting was held on 1/30/21. IGA is scheduled for CCBWQA's May TAC and Board meetings (4/30/21). IGA was approved by all parties and has been executed (6/25/21). Muller Engineering has submitted their Draft Scope of Work for Design Services, and the project sponsors have reviewed it (7/8/21). Design kickoff meeting was held on 10/14/21. Alternatives are being evaluated (12/9/21). Pre-submittal meeting for the 404 permit is being scheduled (12/30/21). CLOMR is being prepared for project (3/10/22) and was submitted to FEMA on 3/31/22. CEI was selected for as project partner to provide contractor input during the design (5/27/22). CLOMR is under review by FEMA (8/12/22). Muller has received comments on CLOMR and is preparing responses; 90% Submittal is scheduled for early February (1/27/23). Comments on 90% Submittal were provided on 2/22/23; project is experiencing substantive cost increases due to current market conditions (2/24/23). *TAC at their 3/2/23 meeting recommended that the Board authorized the IGA Amendment to bring in 2023 funding along with an increase in CCBWQA's 2023 funding from \$170,000 to \$570,000.*
4. McMurdo Gulch Priority 3 Stream Reclamation (CCB-7.2)
 - a. Description: The design and construction of stream reclamation is in partnership with Castle Rock. Castle Rock is the lead agency. This phase continues the work from the previous phase. Muller Engineering is the design consultant.
 - b. Status: Board authorized IGA for Priority 3 at their May 19,2022 meeting. Muller submitted their 30% deliverable on 10/31/22, review comments were returned on 11/8/22. Easements needed for projects have been identified (1/23/22). The 60% Submittal was received on 1/30/23 and comments have been provided on 2/7/23. Muller is working on updating their construction cost estimate (2/8/23). On 2/23/23, Castle Rock requested that CCBWQA's 2023 funding be deferred to 2024 to match their schedule.
5. Lone Tree Creek in Cherry Creek State Park (CCB-21.1)
 - a. Description: This project includes a trail connection to Cherry Creek State Park and includes 570 linear feet of stream reclamation on Lone Tree Creek from the State Park Boundary to the Windmill Creek Loop Trail. The City of Centennial is the project lead. CCBWQA participation is for the stream reclamation only.
 - b. Status: 95% submittal is under review (5/13/22); review comments have been returned (5/27/22). Project funding was brought to TAC at their 7/7/22 meeting, during drafting of IGA it was discovered that future maintenance of stream reclamation should be considered, project will be brought back to TAC at an upcoming meeting for maintenance discussion and recommendation (8/12/22). A stakeholder meeting was held on 9/29/22 to discuss maintenance. A stakeholder meeting was held on 11/2/22 to discuss findings from CCBWQA's site visit and findings included in Wright Water Engineers report. The Board supports CCBWQA's partnering with Centennial at their 11/17/22 meeting.
6. Happy Canyon Creek – County Line to Confluence with Cherry Creek (CCB-22.1)

- a. Description: The design and construction are in partnership with Southeast Metro Stormwater Authority and MHFD and includes 2,500 feet of stream reclamation. The Authority's water quality component share for design and construction is estimated to be \$325,000. The total project cost is estimated at \$1,300,000.
 - b. Status: IGA is scheduled for June TAC and Board meetings (5/27/21). IGA has been approved and executed by all parties (7/29/21). Jacobs has been selected as design consultant and project scoping is underway; limits have been extended upstream to the County Line and sediment capture area and transport will be included with the project (10/15/21). Jacobs has submitted their scope of work and fee for design which is under review by project sponsors (11/11/21). Project sponsors have completed a review of Jacobs' fee and scope of work and the agreement is being routed for signatures (1/28/22). IGA Amendment to bring in 2022 funding is in process (3/10/22). A project kickoff meeting was held on 3/28/2022. A site visit was performed on 4/12/22 to document existing conditions and identify sediment source/transport/deposition areas. Project Team is preparing a sampling plan for bank and bed materials to determine phosphorous content (5/13/22). The project team met on 5/24/22 to discuss project goals and Jacobs is progressing through the study. Jacobs and ERC are working on sediment transport analysis and model (6/30/22). The results from the sediment transport model were presented at the 8/23/22 progress meeting and an upstream sediment capture area just south of the JWPP was included in the alternatives analysis (8/26/22). The alternative analysis report is expected to be completed before the end of 2022 (10/13/22). Lab results from stream soil samples were sent to Jacobs so that they include phosphorus reduction in the alternatives analysis report; a groundwater investigation is needed to inform sediment capture facility and stream reclamation alternatives, scoping and negotiations are in progress (11/11/22). Groundwater scope of work has been reviewed and approved by project sponsors (1/13/23).

7. Happy Canyon Creek - Upstream of I-25 (CCB-22.2)
 - a. Description: The design and construction are in partnership with Douglas County, City of Lone Tree, and MHFD and includes 2,500 feet of stream reclamation. The Authority's water quality component share for design and construction is estimated to be \$500,000. The total project cost is estimated at \$2,000,000.
 - b. Status: Douglas County, City of Lone Tree, and MHFD have initially funded and selected Muller Engineering as the design engineer. Design has started and a progress meeting was held on 1/27/21. Design is progressing (2/11/21). Muller has submitted 60% Design Deliverables (5/27/21). IGA for 2021 Funding is being brought to Board in September (9/9/21). 2021 IGA Amendment has been executed (11/11/21). Coordination with CDOT and easement acquisitions are on-going (1/13/22). Board authorized 2022 funding and IGA Amendment at their June 16th meeting (6/30/22). The project received environmental clearance from CDOT (8/12/22). The 90% design submittal is scheduled for delivery by end of September (8/26/22). The 90% design submittal is being reviewed (10/13/22). Comments were provided on 90% submittal (11/11/22). Muller completed the 100% design submittal on 11/22/22. CDOT permit was issued, and pre-construction meeting was held on 1/10/23; construction start is scheduled for 1/30/23 pending execution of easement documents from Surrey Ridge which has agreed to terms and easement language. Notice to Proceed on construction is pending execution of easement documents (1/27/23). Easements have been signed by property owners and Notice to Proceed has been issued to Naranjo Civil Constructors (2/8/23). *Construction is underway with initial construction BMPs/stormwater controls in place; water diversion and control is being set up for the downstream section of the project (3/10/23).*

8. Dove Creek - Otero to Chambers Rd. (CCB-23.1)
 - a. Description: The design and construction are in partnership with Southeast Metro Stormwater Authority (SEMSWA) and with Mile High Flood District (MHFD) being a key stakeholder; it includes 1,300 feet of stream reclamation. The Authority's water quality component share for design and construction is estimated to be \$175,000. The total project cost is estimated at \$700,000.

- b. Status: SEMSWA is drafting the Intergovernmental Agreement to bring in the 2021 funding for the project (3/12/21). RESPEC is the design consultant; two conceptual design alternatives have been prepared and reviewed during meeting on 3/15/21. IGA is scheduled for CCBWQA's May TAC and Board meetings (4/30/21). IGA has been approved and executed by all parties (7/29/21). 30% Design Review Meeting was held on 8/23/21. A Progress meeting is scheduled for 2/26/22 with 60% Plan submittal expected to follow (1/28/22). The 60% Design was submitted on 2/16/2022, comments were provided, and a design review meeting was held on 2/23/2022. IGA Amendment to bring in 2022 funding is in process (3/10/22). Construction costs were prepared by CEI based on 60% submittal (5/13/22). A design progress meeting was held 6/14/22 and 90% design submittal is being prepared (6/30/22). 90% design submittal is expected by the end of July (7/15/22). The 90% design submittal was reviewed, and comments were submitted on 8/22/22. *Construction is anticipated in 2023 (10/13/22)*. A progress meeting was held on 11/8/22, project will likely be done in 2 phases, IGA Amendment will be needed early in 2023 so that construction can start ahead of storm season. Dove Creek IGA for construction of Phase 1 is scheduled for TAC and Board in January 2023, construction is expected to start shortly afterwards (12/30/22). Construction is scheduled to start mid-February; construction agreement and engineering construction services amendment are currently being reviewed (1/27/23). Construction and engineering construction services have been finalized and a preconstruction meeting was held on 2/2/23. *Notice to Proceed has been issued to Concrete Express; construction is underway with initial construction BMPs/stormwater controls in place (3/10/23)*.

- 9. Piney Creek from Fraser Street to Confluence with Cherry Creek aka Reaches 1 and 2 (CCB-21.1)
 - a. Description: This project includes 2900 liner feet of stream reclamation on Piney Creek. The project partners are SEMSWA and CCBWQA.
 - b. Status: Project coordination meeting was held with SEMSWA on 6/29/22. IGA drafted and is being reviewed by SEMSWA (8/12/22). IGA was approved by CCBWQA at the 9/15/22 Board meeting.

- 10. Mountain and Lake Loop Shoreline Stabilization Phase II (OM 4.6)
 - a. Description: This project was identified in through the 2020 annual inspection and design and permitting started in 2021. It adds about 40 feet of shoreline protection where it has eroded leaving a 1-2 foot tall vertical bank.
 - b. Status: Construction Plans have been prepared and the GESC was submitted to Arapahoe County for review (1/13/22). Plans are being reviewed by US Army Corps of Engineers for 408 clearance (5/13/22).

- 11. Cherry Creek from Reservoir to Lake View Drive (OM 4.6)
 - a. Description: This project is in follow up to CCBWQA's study of Cherry and Piney Creeks in Cherry Creek State Park (CCSP). Muller completed two reports on Cherry Creek from Reservoir to State Park Boundary, Stream and Water Quality Assessment and Baseline Channel Monitoring Report, in 2022. These reports highlight the need for this project.
 - b. Status: *A workshop is scheduled for the 3/16/23, to seek CCBWQA Board and TAC input and direction on this project and Cherry and Piney Creeks in CCSP (3/10/23)*.

MEMORANDUM

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

CCBWQA Data Portal Water Quality Update Page Link - <http://ccbwwqportal.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 Previous 5-Year Average

Site		Cherry Creek @ CC-10		Cottonwood Creek @ CT-2	
Month	Flow	Total Phosphorus ($\mu\text{g/L}$)	Total Nitrogen ($\mu\text{g/L}$)	Total Phosphorus ($\mu\text{g/L}$)	Total Nitrogen ($\mu\text{g/L}$)
October	Base	172 (190)	814 (895)	34 (48)	2520 (2970)
November	Base	150 (152)	776 (1526)	46 (42)	2940 (2622)
December	Base	112 (138)	1320 (1688)	23 (38)	3860 (4138)
January**	Base	102 (123)	1680 (1855)	25 (35)	3830 (4130)

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

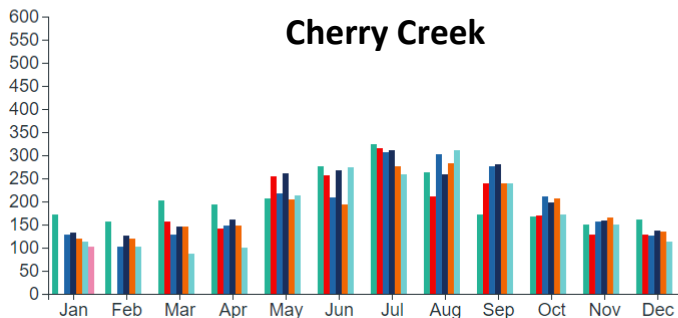
**2018-2022 5-year mean.

The averages of the base flow and storm flow concentrations are calculated monthly. Although the values do not represent flow-weighted concentrations, the simple averages are included to provide a comparison to long-term monthly average concentrations.

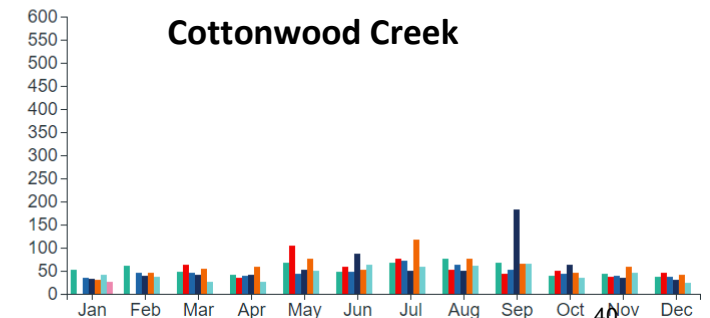
Total Phosphorous (ug/l)

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

cc-10



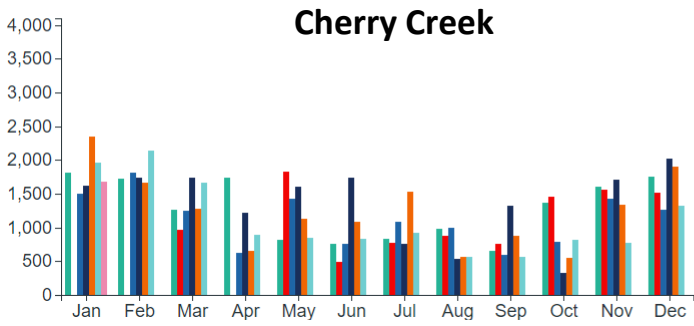
CT-2



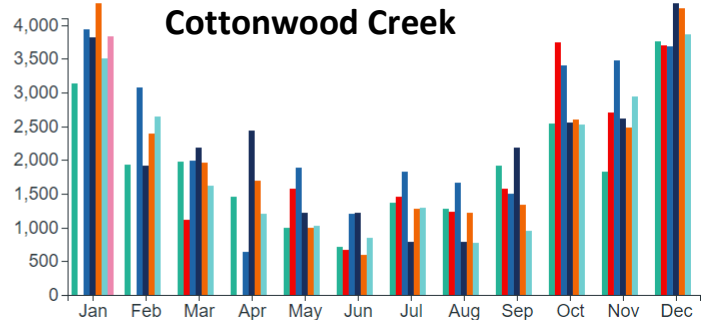
Total Nitrogen (ug/l)

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

cc-10



CT-2



Monitoring Schedule and Updates

Cherry Creek Reservoir Monitoring will resume as soon as the Reservoir is no longer ice covered. Hopefully we will be able to get access by the end of the month to collect the March sample which is normally able to be collected.



March 16, 2023 Workshop Schedule

- 8:30-9 General Board Meeting
- 9-11 Cherry Creek Workshop
- 11-11:30 BMP Effectiveness Study
- 11:30-12:30 Lunch afterwards, if interested (consultants are available for questions)

Cherry and Piney Creeks Workshop Agenda and Topics

- 9:00 to 9:10 Introduction, structure, and goals of Workshop (Clary, Borchardt)
- 9:10 to 9:30 High level overview of Cherry and Piney Creeks in the Studies (Muller presentation)
- Severity of issues on almost all the reaches (15 minutes)
 - Questions (5 minutes)
- 9:30 to 10:20 Highest Priority - Reach 1 on Cherry Creek from Reservoir to Lake View Drive
- Risks of Inaction (Muller, 10 minutes)
 - Potential approaches for stream reclamation (Muller, 10 minutes)
 - Highlight water quality benefit (Muller, 10 minutes)
 - Questions, discussion, and request for action/direction (Borchardt, 20 minutes)
- 10:20 to 10:30 Break
- 10:30 to 11:00 The whole system and the rest of the story – the remaining reaches of Cherry and Piney Creeks
- The other reaches Cherry Creek State Park and Cherry Creek upstream to Soccer Fields may be longer-term priorities (Muller, 10 minutes)
 - Risks of Inaction (Muller, 5 minutes)
 - Questions, discussion, and request for action/direction (Borchardt, 15 minutes)

BMP Effectiveness Study Presentation

- 11:00 to 11:30 Overview of BMP Effectiveness Study (Jane Clary, WWE)
- Scope and initial progress (20 minutes)
 - Discussion and Identification of additional practices to include (10 minutes)

Lunch

- 11:30 to 12:30 Lunch with Muller and WWE available to answer questions