



ACTION ITEM MEMORANDUM

To: CCBWQA Technical Advisory Committee (TAC)
 From: Richard Borchardt, Pollution Abatement Project Manager
 Date: October 5, 2023
 Subject: Cherry Creek Stream Upstream of Scott Road – IGA Amendment

Request: The TAC recommends that the Board authorize the execution of the Amendment to Intergovernmental Agreement (IGA Amendment) for the stream improvements 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 near 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 improvements benefit 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. CCBWQA’s participation of \$409,000 is needed to take the project to construction and is 24% which is less than the 25% limit historically used on partner projects.

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

Table 1

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 \$963 per pound¹, whereas analysis of 10 projects in the Draft 2024-2033 Capital Improvement Program provides an average cost of \$1,016 per pound² and well below the highest of the 10 projects of \$1,128 per pound³ for the Piney Creek Reach 6 upstream of Caley.

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 to recommend that the Board authorize the execution of the Amendment to Intergovernmental Agreement (IGA Amendment) for the stream improvements 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 cost of phosphorus removal including partner participation based adjusting completed project cost to 2023 dollars using ENR building cost index then annualizing costs completed project over 35 years at 4% interest rate.

² Unit cost of phosphorus removal including with partner participation at 75% and CCBWQA participation of 25% based adjusting completed project cost to 2023 dollars using ENR building cost index then annualizing costs completed project over 35 years at 4% interest rate of 10 projects analyzed in Draft 2024-2033 CIP.

³ Unit cost of phosphorus removal including partner participation based adjusting completed project cost to 2023 dollars using ENR building cost index then annualizing costs completed project over 35 years at 4% interest rate.

Richard Borchardt

From: Jim Watt <jwatt@mhfd.org>
Sent: Tuesday, September 5, 2023 1:03 PM
To: Richard Borchardt; Brad Robenstein
Subject: Cherry Creek upstream of Scott Rd Finances and IGA

Brad and Rich – I wanted to give you a heads up that I anticipate Muller will be submitting the final design package to us next week. I am looking forward to seeing the engineers cost estimates and then coordinating with Naranjo to firm up the project budget.

Per coordination with Brad, we have decided to rearrange some of the planned MHFD 2023 Douglas County CIP funding. This increased MHFD’s funding from \$300K to \$500K.

Brad – We had recently discussed the possibility of Douglas County contributing additional funds to this project in 2023. \$200K was discussed. Do you have a firm number at this point or an estimate of when you will have that number?

Rich – It seemed that there was also a possibility that CCBWQA could contribute additional funding to the project as well in 2023. Could you please let us know your timeline for needing to make decisions around this additional funding?

FYI, assuming that Douglas County is adding \$200K this year, CCWQBA is adding \$200K this year, and MHFD is adding \$500K we are projected to have a 20% contingency when planning for the Naranjo’s 60% estimate. I am guessing that the contingency will go down to the 10% level once we see the refined final design quantities and a cost estimate update that is over a year old.

I will begin working towards an IGA amendment in the meantime. Looking forward to your feedback and progressing the final design.

Thanks,
Jim

Jim Watt, P.E., CFM

Watershed Manager

MILE HIGH FLOOD DISTRICT

12575 W. Bayaud Ave. | Lakewood, CO 80228

Office: 303-455-6277 | Direct: 303-749-5455 | www.mhfd.org

Protecting People, Property, and our Environment



MEMORANDUM

To: CCBWQA Technical Advisory Committee
From: Jane Clary, Technical Manager and Bill Ruzzo, Executive Committee
Date: October 3, 2023
Re: Draft 2024 Expense Budget for CCBWQA

The initial draft of the Authority's 2024 Expense Budget for the General (GF) Pollution Abatement (PAF), and Enterprise (EF) funds is attached to this memorandum for discussion at the October 2023 TAC meeting. The full budget that includes revenue information will be presented to the Board in draft form at the October 2023 Board meeting and finalized in November 2023.

We request that the TAC review the Authority's planned expenses for Capital and O&M activities (i.e., PAF and EF expense budgets) and provide recommendations to the Technical Manager (TM) to convey to the Board at the October meeting. The TAC is also requested to comment on the need for and scope of the Pollution Abatement Project Manager role for the future.

The 2024 Expense Budget contains uncertainties related primarily to oversight of capital projects due to the resignation of R2R Engineers effective December 31, 2023. The TM, staff, and a member of the Executive Committee met to discuss options for covering R2R work tasks for 2024 and identified four general approaches, listed below. Whereas most of R2R work tasks can be covered by one or more of these options, there are still some work tasks that have not been assigned. Costs for these efforts in the current draft budget are identified as either Other or remain in the R2R budget ("PAPM/R2R"), due to timing of information on staff changes related to budget planning. Options include a combination of the following:

1. Assign the work task for 2024 to the TM contract with support from WWE staff.
2. Assign the work task to RG Consultants.
3. Provide limited oversight by the TM of capital projects that are nearing completion.
4. Temporarily delay the work task for 2024.

Because decisions have not been made on the best approach, RG Consultants and WWE scopes and budgets are not yet final. Additionally, R2R Engineers' transition services scope for January 1 through March 31, 2024 is estimated at \$27,300. Costs have not been reallocated among PAPM tasks as of the time of this draft budget. A staff category of PAPM/R2R is used in the October budget draft as a placeholder.

The Draft 2024 Expense Budget compared to the final 2023 budget shows an average 12% increase with individual funds projected to change as follows:

1. General Fund: decrease by 1 percent
2. Pollution Abatement Fund: increase by 13 percent
3. Enterprise Fund: increase by 31 percent (if RDS study conducted)

The changes in the draft 2024 Expense Budget compared to the final 2023 Budget are due to the following:

1. Increases in consultant billing rates and construction costs.
2. Additional services, such as RDS study cost, additional stream restoration projects, and an option for social media education and outreach.
3. Inflation, which primarily impacts capital and operations/maintenance projects.

Attachment: Draft 2024 CCBWQA Expense Budget Worksheets (subject to change)

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
GENERAL FUND
2024 BUDGET - WORKSHEET DRAFT FOR TAC DISCUSSION

For the Years Ended and Ending December 31,

BUDGET	BUDGET
2023	2024

BEGINNING FUND BALANCE

REVENUE

Property taxes
 Specific ownership tax
 Interest income/Other

Total revenue
 Total funds available

EXPENDITURES

General and administrative

		NEW		
107000	7000	Accounting	70,000	70,000
107010	7201	Administrative Assistant	86,300	86,500
107020	7020	Auditing	7,500	8,000
107200	7200	County Treasurer's fee	39,900	43,122
107030	7030	CC Stewardship Partners	35,000	35,000
107350	7350	Dues and memberships	2,000	2,000
	7355	Information and Education Coordination	-	12,000
107360	7360	Insurance and bonds	10,000	6,500
107440	7440	Management/administration	69,000	68,700
107460	7460	Legal services	100,000	100,000
107481	7480	Office/ Miscellaneous Expenses	7,400	7,500
107445	7415	TAC coordination	20,800	20,800
107050	7050	Regulatory Support WQCC Regulation Hearings	228,000	145,000
107040	7803	CCBWQA Website	10,000	6,000
			685,900	611,122

Watershed Management

107451	7410	Annual report	32,000	32,000
107453	7411	Database Modules and GIS Data Management	45,000	50,000
107450	7413	General watershed management	125,000	188,000
107452	7414	Land Use Referrals Reviews	-	-
107454	7412	Site Application Reviews	6,400	6,400
			208,400	276,400

Sampling and Analysis Program

107500	7500	General Technical Support	55,000	40,000
107501	7501	Monitoring - Reservoir	36,000	40,000
107502	7502	Monitoring - Watershed	48,000	53,000
107506	7503	Monitoring - Laboratory and Other Direct Costs	120,000	120,000
107505	7504	Reporting and Data management WQ Data Reporting	56,000	58,000
			315,000	311,000

Total expenditures

1,209,300	1,198,522
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CHERRY CREEK BASIN WATER QUALITY AUTHORITY
POLLUTION ABATEMENT FUND SPECIAL REVENUE FUND
2024 BUDGET - WORKSHEET DRAFT FOR TAC DISCUSSION

For the Years Ended and Ending December 31,

		BUDGET 2023	BUDGET 2024
BEGINNING FUND BALANCE			
REVENUE			
116360	Interest income / Other		
116500	Other Revenue		
	Total revenue		
TRANSFERS IN			
116901	Transfers from General Fund		
116902	Transfers from Enterprise Fund		
116904	Supplemental Transfers		
	Total transfers in		
	Total funds available		
EXPENDITURES			
General and administrative			
	NEW		
117440	7440 Management/administration	396,100	396,100
	7724 PAPS - Undesignated		
117890	7582 Repairs and maintenance Contingency	10,000	10,000
		406,100	406,100
Pollution Reduction Facilities - O&M			
117723	7811 PRF Routine	10,000	10,000
117582	7812 PRF Repairs and Maintenance	111,200	195,000
117722	7813 PRF Restoration	40,000	40,000
117702	7814 PRF Reservoir Destratification Service Plan	26,400	27,400
117724	7815 Meteorological Station Service	3,000	3,000
117715	7816 PRF weed control	10,000	20,000
117712	7817 Wetlands Harvesting	108,000	108,000
117701	7818 Res Destratification System-Utilities-Reservoir Destratification	65,000	65,000
117890	7890 Contingency	25,000	25,000
		398,600	493,400
Reservoir Projects			
117726	7510 RSS RDS Rehabilitation	47,700	48,000
117804	TBD RSS Internal Loading Evaluation		-
			48,000
Shoreline Stabilization			
117728	7511 RSS East Shade Shelter	599,000	658,000
117729	7512 RSS Tower Loop	-	-
117703	7513 RSS West Shade Shelter		
117890	7890 Contingency	50,000	50,000
		696,700	708,000
Stream Reclamation Projects			
117802	7755 CC Arapahoe (R3-4)	605,000	300,000
117803	7756 CC 12-Mile Park		
117884	7757 CC Dransfeldt Extension	170,000	
117885	7758 Dove Creek: Otero To Chambers	138,000	
117886	7759 Happy Canyon: Jordan to Broncos Pkwy	88,000	50,000
117877	7760 McMurdo Gulch	907,000	1,121,000
117872	7761 Piney Creek (Reach 1-2)	63,000	39,000
117869	7762 Reservoir to LV Rd	200,000	181,000
117725	7763 Preservation - Acquisition Lease	100,000	100,000
117882	7764 CC Scott Road		
117887	7765 Happy Canyon : I25 Upstream		
117879	7766 Lone Tree Creek	-	112,000
	TBD Lone Tree Creek (downstream of pond)		120,000
n/a	TBD Dove Creek - Pond D1 to Otero		540,000
n/a	TBD Piney Creek - (Reach 4-5)		75,000
117890	7890 Contingency	100,000	100,000
		2,371,000	2,738,000
Total expenditures		3,872,400	4,393,500

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
ENTERPRISE FUND
2024 BUDGET - WORKSHEET DRAFT FOR TAC DISCUSSION
WITH 2022 ACTUAL AND 2022 ESTIMATED
For the Years Ended and Ending December 31,

BUDGET 2023	BUDGET 2024
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BEGINNING FUND BALANCE

REVENUE

406351	Recreation fees		
406349	Building permit fees		
406352	Wastewater surcharge		
406360	Interest income		
	Other revenue		
	Total revenue	-	-
	Total funds available	-	-

EXPENDITURES

NEW			
General and administrative			
407440	7440	Management/administration	21,000
407355	7618	Equipment	65,000
407890	7890	Contingency	15,000
Planning			
407733.01	7677	CCBWQA Planning	105,000
407733	7681	Tributary Planning	-
407720	7683	Reservoir to 12-Mile Park Study	5,000
407733.02	TBD	Partner Planning	-
Special Studies/Projects			
407735	7684	BowTie	-
407736	7685	BMP Effectiveness	75,000
407737	7686	PRF/PAP WQ Benefits	5,000
407740	7687	Reservoir Nutrient Mitigation	50,000
407738	7688	Emerging SCM	-
407741	7689	Watershed Master Plan	50,000
n/a	TBD	RDS Distribution Analysis	270,000
		Total expenditures	391,000
			511,000

TOTAL EXPENSES TRACKING ESTIMATES FOR WORKING DRAFT 2024 BUDGET

	GF	PAF	EF*	Total
2023 Budget	\$ 1,209,300	\$ 3,872,400	\$ 391,000	\$ 5,472,700
2024 Budget	\$ 1,198,522	\$ 4,393,500	\$ 511,000	\$ 6,103,022
% Change	-1%	13%	31%	12%

60:40 Check

72%

*EF increase due to RDS Study allotment

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.