UPPER EAGLE REGIONAL
WATER AUTHORITY

GOVERNED BY:

The Metropolitan Districts of:
Arrowhead
Beaver Creek
Berry Creek
EagleVail
Edwards

The Town of Avon

M E M O R A N D U M

TO: Board of Directors

FROM: Brian Thompson, Government Affairs Administrator

DATE: October 21, 2022

RE: October 27, 2022, Board Meeting

This memorandum shall serve as notice of the Regular Meeting of the Board of Directors of the Upper Eagle Regional Water Authority:

Thursday, October 27, 2022
8:30 a.m.

This meeting will be held in-person
Walter Kirch Room
Eagle River Water & Sanitation District Vail office
846 Forest Road
Vail, Colorado

The meeting can also be accessed on Microsoft Teams. Login information can be requested by sending an email at least 24 hours in advance to info@erwsd.org. In-person attendance is subject to COVID-19 protocols.

Input from members of the public is welcomed during the meeting's designated Public Comment and Public Hearing periods, consistent with §18-9-108, C.R.S. Speakers may address the Board on a first-recognized basis by the Chair. Public Comments are limited to three minutes per speaker on relevant matters not listed on the agenda.

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The Town of Avon

BOARD OF DIRECTORS REGULAR MEETING
October 27, 2022
8:30 a.m.
Walter Kirch Conference Room

AGENDA

1. Introductions		**Attachment Link**
2. Public Comment		
3. Action Items		
3.1.	Approval of minutes from the September 22, 2022, Regular Meeting	Action Item
3.2.	Consideration of weather modification program participation – Jason Cowles	Action Item
4. Information Reports		
4.1.	Development Report	Informational
4.2.	Board committees	Informational
4.3.	September meeting summary – draft	Informational
4.4.	Contract log	Informational
5. Strategy Items		
5.1.	Board member input	
5.1.1.	Arrowhead's thoughts on recommencing unification discussions	
5.2.	Work session: Proposed FY 2023 Budget – David Norris & Jim Cannava	Informational
5.3.	Work session: Water Dedication Policy – Jason Cowles & Kristin Moseley	Informational
6. General Manager Report – Linn Brooks		
6.1.	GM information items	
6.2.	Business Administration report – David Norris	
6.2.1.	Quarterly financials – Jim Cannava	Informational
6.3.	Operations report – Siri Roman	Informational
6.4.	Engineering and Water Resources report – Jason Cowles	Informational
6.5.	Communications and Public Affairs report – Diane Johnson	Informational
7. Water Counsel Report – Kristin Moseley		
8. General Counsel Report – Kathryn Winn		Confidential

9. Executive Session

9.1. Motion to move into Executive Session pursuant to §24-6-402(4)(b) and (e), C.R.S, for the purposes of receiving legal advice and discussing matters in negotiations related to:

9.1.1. Colorado River Cooperative Agreement issues — Confidential

9.1.2. Camp Hale-Continental Divide National Monument implications — Confidential

10. Any Action as a Result of Executive Session

11. Adjournment

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

M E M O R A N D U M

TO: District and Authority Boards of Directors

FROM: Jason Cowles, P.E.

DATE: October 19, 2022

RE: Central Colorado Mountains River Basin Weather Modification Funding Request

The Central Colorado Mountains River Basin Program (CCMRB Program) is a collaborative effort involving various local, State, and regional partners that provides funding for wintertime cloud seeding operations in the central Colorado Rockies. The target area for the CCMRB Program is depicted in blue shading on Figure 1 and includes portions of Grand, Summit, Pitkin, Eagle, and Lake counties in the upper Colorado River Basin watershed above 8,500 feet in elevation. Cloud seeding has been shown to increase snow water equivalent in target areas by as much as 2 to 5%, and is viewed as a cost effective way of generating more yield from winter storms.

Western Weather Consultants, LLC (WWC) provide contract cloud seeding operations for the CCMRB Program. WWC monitors and evaluates weather conditions throughout the target area for time periods with positive cloud seeding potential. Silver iodide crystals are dispersed into the atmosphere using a network of ground-based generators when wind patterns during selected storm events are anticipated to generate additional precipitation from the storms over the target area. According to an annual report on the winter 2021-2022 CCMRB Program, WWC seeded a total of 26 storms over 36 days and 2,758.75 hours of cloud seeding between November 11, 2021 and April 13, 2022. WWC estimated that cloud seeding operations produced an additional 71,550 to 85,373 acre feet (AF) of water within the target area at an estimated cost of $3.46/AF to $4.12/AF.

WWC operates the CCMRB Program under a 5-year permit issued by the State of Colorado that restricts cloud seeding operations based upon a variety of factors including snow water equivalent levels, avalanche hazard potential, blizzard warnings, and flooding potential. The permit is anticipated to be renewed by November 1 for an additional 5-year period.

The CCMRB Program is funded by contributions from State, local, and regional entities that contribute lump sum payments for annual operations at the beginning of each winter season. Any unspent funds are rolled into funding for subsequent years. In the past, the bulk of the funding for the CCMRB Program was provided by Vail Resorts. Following ski area closures during the COVID-19 pandemic, Vail Resorts ended its participation in the CCMRB Program. The District and Authority Boards subsequently agreed to provide $15,000 each in annual funding with the expectation that Vail Resorts would eventually rejoin the program.

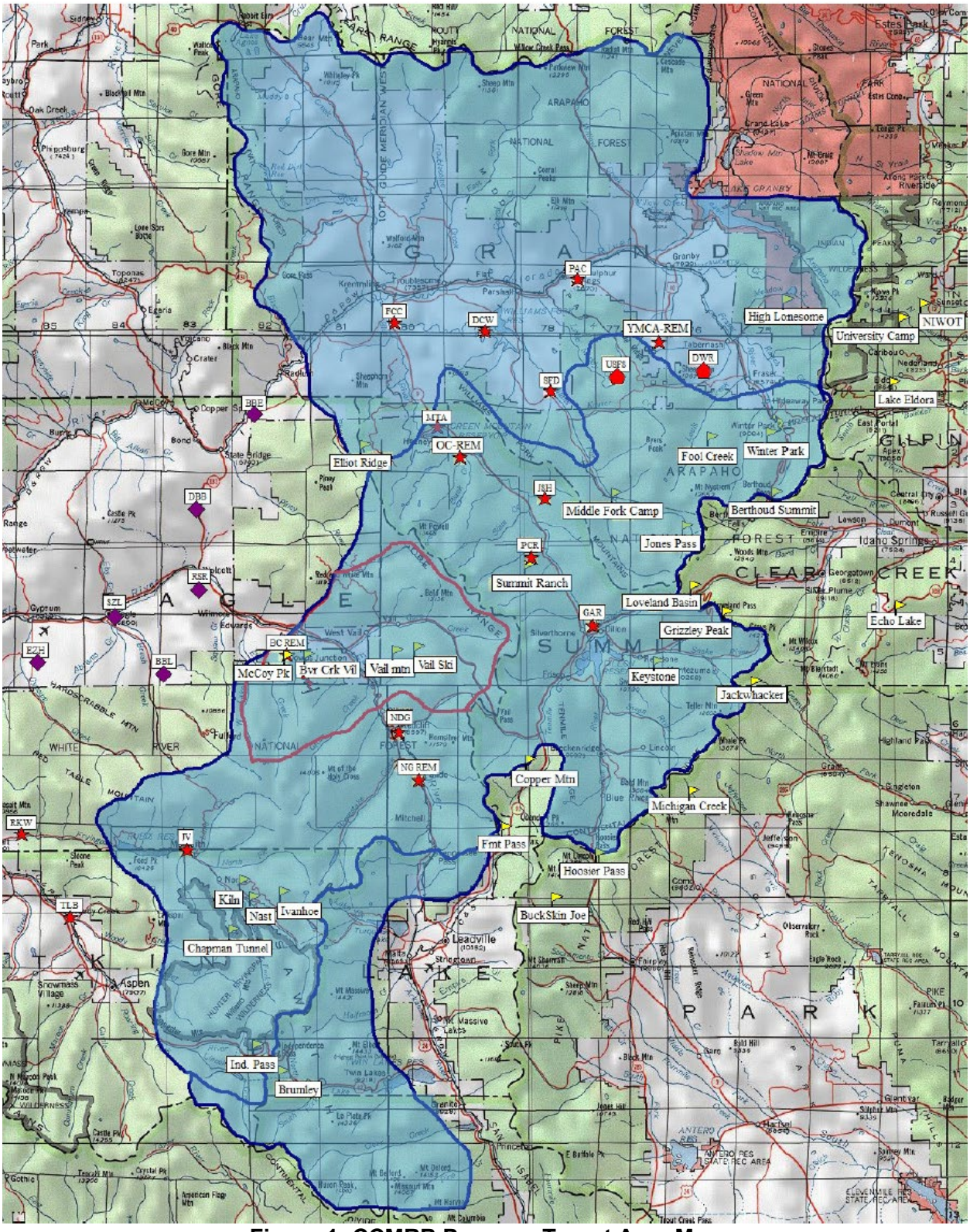

Figure 1: CCMRB Program Target Area Map

The Colorado River Water Conservation District (CRWCD) has received funding commitments from several entities to fund the estimated $360,000 needed for CCMRB Program operations for the 2022-2023 winter season. The Colorado Water Conservation Board (CWCB) currently provides the bulk of the funding for the CCMRB Program with cooperating funds it receives from Lower Colorado River Basin States. Prior funding commitments obtained by the CRWCD for the 2022-2023 winter season are provided in Table 1. The District and Authority each budgeted $15,000 for contributions during the 2022 budget year to fund 2022-2023 operations.

Table 1: 2022-2023 CCMRB Program Funding	
CWCB	$125,000
Northern Water	$ 25,000
Southeast Colorado Water Conservancy District	$ 25,000
Aurora Water	$ 25,000
Pueblo Board of Waterworks	$ 12,500
Denver Water	$ 25,000
Colorado Springs Utilities	$ 25,000
Twin Lakes Reservoir and Canal Company	$ 12,500
CRWCD	$ 50,000
Eagle River Water & Sanitation District	$ 15,000
Upper Eagle Regional Water Authority	$ 15,000
Winter Park Resort	$ 5,000
Total	**$360,000**

Colorado Springs Utilities has since informed the CRWCD that they will not participate in the program this year but will reevaluate their participation next year. Unless another source of funding is secured to make up the deficit caused by Colorado Springs Utilities' withdrawal, it is my understanding that the program will simply decrease cloud seeding hours in the target area to operate within the budget of available funds.

In order to provide more certainty for the ongoing funding of the program and to reduce the administrative burden of securing annual funding contributions from participating entities, the CRWCD is seeking funding commitments to cover the remainder of the new 5-year permit for cloud seeding operations totaling $450k per year. At this time, there are no firm commitments from Vail Resorts or other ski area partners, but the CRWCD is working on developing a ski area coalition for additional funding that would include Vail Resorts, Winter Park, Arapahoe Basin, Copper Mountain, and Aspen Ski Company.

Given the Boards' previous hesitancy to commit to becoming a long-term funding partner in the CCMRB Program, I would like to get direction from the Boards on how they would like to proceed so we can appropriately budget for 2023 and beyond. One option would be to provide funding for the 2022-2023 winter season as budgeted, then reevaluate future commitments and funding levels next year when other funding commitments have been secured.

Please let me know if you have any questions or need any additional information.

Return to agenda

ERWSD New Development Report

October 2022

		Type of Use	SFEs Proposed	Location	Existing Service Commiment?	Augmentation Requirement	Development Approval Process Step:	Construction Approval Process Step:
	534 E Lionshead Circle - Elevation	Residential	12	Vail	No	0.49	2. Water Analysis	0. Conceptual
	500 E Lionshead Circle - Legacy	Residential	23	Vail	No	0.31	2. Water Analysis	2. Plan Approval
	Alura (Miradoro)	Residential	10	Vail	No	0.83	1. Connection Application	1. Plan Review
	Belden Place (1200 Block Main St)	Residential	41	Minturn	Yes		N/A	2 Plan Approval
	Booth Heights	Residential	61	Vail	No	TBD	1. Connection Application	0. Conceptual
	Highline (Double Tree Expansion)	Residential	43.65	Vail	No	0.79	6. Ability to Serve Letter	1. Plan Review
	Midtown Village PUD	Res + Com	43.55	Minturn	Yes		1. Connection Application	1. Plan Review
	North Minturn PUD	Residential	184	Minturn	Yes		N/A	1. Plan Review
	The Residences at Main Vail	Residential	72	Vail	No	0.81	6. Ability to Serve Letter	2. Plan Approval
	S. Frontage Rd Roundabout	Infrastructure	N/A	Vail	Yes		N/A	2. Plan Approval
	Vail Mountain View Phase II	Mixed Use	37	Vail	Yes		6. Ability to Serve Letter	N/A
	VVMC Phase II-East Wing	Commercial	--	Vail	Yes		N/A	2. Plan Approval
	Vail Marriott Residence Inn	Mixed Use	75	Vail	Yes		N/A	2. Plan Approval
	Wolcott PUD	Mixed Use	328 + Com	Wolcott	No	TBD	0. Conceptual	0. Conceptual
	Projects Completing Warranty Period							
	3010 Basingdale (Phase II), 841/851 Main St Minturn, Red Sandstone Parking Garage							

Process							
	Construction Approval Process Steps:	0. Conceptual	1. Plan Review	2. Plan Approval	3. Acceptance	4. Warranty Period	5. Final Acceptance
	Development Approval Process Steps:	1. Connection Application	2.Water Demand Worksheet Analysis	3.Conditional Capacity to Serve Letter	4.Water Rights Allocation	5.Water Service Agreement	6. Ability to Serve Letter

UERWA New Development Report

Octoberber 2022

		Type of Use	SFEs Proposed	Location	Existing Service Commiment?	Augmentation Requirement	Development Approval Process Step:	Construction Approval Process Step:
	140 W Beaver Creek Bvld (Extended Stay)	Residential	97.5	Avon	Yes		N/A	0. Conceptual
	Avon Dual Brand Hotel(Traer Tract J)	Commercial	85.05	Traer	Yes		6. Ability to Serve Letter	2. Plan Approval
	CMC Student Housing (Phase I & II)	Residential	72	Edwards	Yes		6. Ability to Serve Letter	2. Plan Approval
	CVC Clubhouse Residences	Residential	9	Edwards	Yes		6. Ability to Serve Letter	2. Plan Approval
	ECO School District Housing	Residential	37	Edwards	Yes		6. Ability to Serve Letter	2. Plan Approval
	Edwards River Park PUD	Mixed Use	440+com	Edwards	No	61.8	3. Cond. Capacity	0. Conceptual
	Fox Hollow Amended PUD	Mixed Use	108	Edwards	No	14	6. Ability to Serve Letter	1. Plan Review
	Frontgate (CO World Resorts)	Mixed Use	84	Avon	No	2.6	6. Ability to Serve Letter	2. Plan Approval
	Kudel Parcel	Residential	4	Edwards	No	2.4	6. Ability to Serve Letter	2. Plan Approval
	Margaux PUD	Residential	32	Edwards	No	3.56	3. Cond. Capacity	0. Conceptual
	Maverik Gas Station	Commercial	2.6	Traer	Yes		6. Ability to Serve Letter	2. Plan Approval
	McGrady Acres	Residential	24	Avon	Yes		6. Ability to Serve Letter	2. Plan Approval
	Mountain Hive	Residential	110.5	Edwards	No	14.1	2. Water Analysis	0. Conceptual
	NorthStar PUD Amendment	Commercial	TBD	Edwards	No	3.7	6. Ability to Serve Letter	2. Plan Approval
	Riverfront Lot 1	Residential	53	Avon	Yes		N/A	2. Plan Approval
	Riverwalk PUD Amendment	Residential	18	Edwards	No	1.8	4. Water Rights	N/A
	Stolport Restaurant (Traer Tract J)	Commercial	TBD	Traer	Yes		6. Ability to Serve Letter	1. Plan Review
	Swift Gulch	Residential	42	Avon	Yes		1. Connection Application	0. Conceptual
	Tract Y- Metcalf Road	Residential	54	Traer	Yes		1. Connection Application	1. Plan Review
	Vogelman Parcel (Carwash)	Mixed Use	1.5	Edwards	No	1.1-2.6	2. Water Analysis	1. Plan Review
	Warner Building 2 Conversion	Residential	13.25	Eagle-Vail	No	0.07	3. Cond. Capacity	N/A
	West End PUD Ammendment	Residential	275	Edwards	Yes		3. Cond. Capacity	0. Conceptual
	Projects Completing Warranty Period							
	6 West Apartments, 185 Elk Tract, Piedmont Apartments, Riverfront Village, Stillwater							

Process						
Construction Approval Process Steps:	0. Conceptual	1. Plan Review	2. Plan Approval	3. Acceptance	4. Warranty Period	5. Final Acceptance
Development Approval Process Steps:	1. Connection Application	2.Water Demand Worksheet Analysis	3.Conditional Capacity to Serve Letter	4.Water Rights Allocation	5.Water Service Agreement	6. Ability to Serve Letter

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

BOARD COMMITTEES

DISTRICT

Audit/Budget	Dick Cleveland Steve Coyer
Employee Housing	Steve Coyer Dick Cleveland
Retirement Plans	Bob Warner Linn Brooks David Norris
Organizational Development	Bob Warner Dick Cleveland
Facilities Master Plan	George Gregory Bob Warner

AUTHORITY

Audit/Budget	Geoff Dreyer George Gregory

JOINT

Water Quality	Sarah Smith Hymes (A) Timm Paxson (D)
Rules and Regulations	Kim Bell Williams (A) Bob Warner (D)
Water Supply Planning	Sarah Smith Hymes (A) Mick Woodworth (A) Kate Burchenal (D) Steve Coyer (D)
Climate Action Plan	Sarah Smith Hymes (A) Kate Burchenal (D) Timm Paxson (D)

(A) = Authority, (D) = District

Return to agenda

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The Town of Avon

MEMORANDUM

TO: Board of Directors

FROM: Brian Thompson, Government Affairs Administrator

DATE: October 21, 2022

RE: Summary of Authority's Sept. 22, 2022, Board Meeting

The following is a summary of items discussed at the Authority's Sept. 22, 2022, Board Meeting.

Directors present and acting were Chair George Gregory, Vice Chair Sarah Smith Hymes, Secretary Kim Bell Williams, Treasurer Geoff Dreyer, Kevin Hillgren, and Mick Woodworth.

Approval of minutes — Directors approved the August 25, 2022, regular meeting minutes.

Cash payment in lieu of dedicating water rights for Riverwalk at Edwards PUD Amendment — Directors unanimously approved a $76,792 cash payment in lieu of a 2.14 acre-foot water rights dedication for added service created by the 2022 Riverwalk at Edwards Planned Unit Development (PUD) Amendment.

Indoor Efficiency Policy — Directors unanimously approved a policy supporting indoor efficiency rebates that 1) assist in lowering monthly service costs for affordable and workforce housing types built before the 1994 plumbing codes and 2) could provide greater water supply benefits due to a property's location within the Edwards gap.

Merge Public Water Systems' Regulatory Compliance Programs — Directors unanimously approved combining the District and Authority public water system identification (PWSID) numbers into a single "Eagle River Water and Sanitation District" PWSID for regulatory compliance programs.

Traer Creek Water Storage Tank — Jeff Schneider provided updates on testing being conducting on the Traer Creek tank.

Sanitary Survey — Brad Zachman reported on the recent Sanitary Survey of the district water system. He said the Colorado Department of Public and Environmental Health issued final letters with no violations cited or questions about data or programs.

Bolts Lake — Jason Cowles said field activities are beginning at Bolts Lake at the end of September

Communications & Public Affairs Report — Diane Johnson summarized the onboarding program for the Eagle Park Reservoir Company board of directors. She also reported on the Colorado River District's annual water seminar and said speakers urged all Colorado River system users to reduce overall water use in response to the continuing drought and depleted system storage.

Return to agenda

UPPER EAGLE REGIONAL WATER AUTHORITY 2022 CONTRACT LOG

Contract No.	Date Executed	Change Order Signed On	Project Name	Contractor	Contract Amt	Project Mgr.	Account No.	Status / Notes
22.20.011	10/04/22		Mountain Star 5 Driveway	360 Paving, LLC	$4,007.50	W. Spring	20.1.2.00.00.043	Open/Contract Expires 10/31/22
22.20.012	10/13/22		Berry Creek Well House Hypochlorite Tank Replacement	Velocity Plant Services	$39,982.00	J. Beairsto	20.1.2.00.00.377	Open/Contract Expires 12/02/22
22.20.013	10/13/22		Berry Creek Wellhouse Maintenance Repairs 2022	Velocity Plant Services	$20,000.00	J. Beairsto	20.1.9.00.17.500	Open/Contract Expires 12/02/22
22.20.014	Pending		Miscellaneous Services for Fenno Wells	Samuelson Pump Company Inc.	$50,000.00	C. Keller	Various	Open/Contract NTE $50,000.00
22.20.015	Pending		Cordillera West Wells Tree Removal	Old Growth Tree Services	$19,055.00	C. Keller	20.1.2.00.00.039	Open/Contract Expires 06/30/23

Return to agenda

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Edwards

The Town of Avon

MEMORANDUM

TO: Board Budget Subcommittee

FROM: David Norris, Director of Business Administration

DATE: October 18, 2022

RE: Proposed 2023 Budget

Introduction

An effective and efficient budget proposal is one that is a team effort and a cross-collaboration from all department managers and staff. This budget season, we continued the hybrid approach of zero-based budgeting and looking at revenue first. Using a collaborative effort of a cross-departmental team to aide in developing the proposed 2023 District and Authority budgets, the attached draft budget packet includes the staff recommended budgets for 2023.

The budget schedule is largely driven by statutory requirements. Critical dates are:

- Oct 15: Draft Budget must be submitted to each Board (Section 29-1-105, CRS)
- Dec. 15: Adopt Budget and appropriate moneys, if certifying a mill levy (Section 29-1-108(2), CRS)

Below is a summary of the proposed 2023 budget. Each topic was discussed in more detail at the first budget subcommittee meeting.

Proposed 2023 Budget Summary

Total Budget Comparison	Amount	$ Change	% Change
2022 Revised Budget	32,873,089		
2022 Projection	25,558,564	(7,314,524)	-22.3%
2023 Proposed Budget	**21,807,352**	**(11,065,736)**	**-33.7%**
2022 Projected Carryforward	2,903,876		
2023 Total Appropriated Funds	**24,711,228**	**(8,161,860)**	**-24.8%**

- Operating increase 16% over 2022 projection, 2.9% over 2022 revised budget
- Capital increase 27% over 2022 projection, 4% decrease from 2022 revised budget
- Bond decrease 52% from 2022 projection, 67% decrease from 2022 revised budget

Net Income Summary

The proposed 2023 budgeted net income is $1,062,736 to account for an added $1 million to build the fund balance to reduce the reliance on Bond funding for future projects. The 2023 proposed CRP rates bring CRP expenses in balance. The positive Operating net income offsets the Capital deficit.

2023 Proposed Net Income Summary

Type	Revenue	Expense	Net
Operating	13,143,878	11,089,457	2,054,421
Debt Service	2,646,362	2,646,362	0
CRP	986,686	980,000	6,686
Capital	538,162	1,536,533	(998,371)
Subtotal	**17,315,088**	**15,752,352**	**1,062,736**
Bond Projects		5,555,000	
Total		**21,807,352**	

Proposed 2023 Water Rate Summary

Water Service Base Charge/SFE/Month				
	2022	2023	$ Change	% Increase
Base Rate	$21.39	$23.53	$2.14	10%
Debt Service 2020 Rev	$5.90	$6.75	$0.85	14%
Debt Service 2020 Ref	$2.80	$2.80	$0.00	0%
Debt Service 2013A Bonds	$3.28	$3.34	$0.06	2%
Capital Replacement Program	$3.96	$4.75	$0.79	20%
Base Portion of Bill per SFE	$37.33	$41.17	$3.84	10%

Water Usage Rates (per kgal)	2022	2023	$ Change	% Change
Note: 6 kgal per tier				
Tier 1 (0-6,000 gallons)	$4.48	$4.75	$0.27	6%
Tier 2 (6,001-12,000 gallons)	$6.72	$7.39	$0.67	10%
Tier 3 (12,001-18,000 gallons)	$11.72	$12.89	$1.17	10%
Tier 4 (18,001-24,000 gallons)	$22.02	$26.86	$4.84	22%
Tier 5 (Greater than 24,000 gallons)	$33.03	$40.30	$7.27	22%

Typical customer pays	2022	2023	Increase	% Increase
Base Fees & 6 kgal use	$64.21	$69.67	$5.46	8.5%

Proposed 2023 Wastewater Rate Summary

Wastewater Service Base Charge/SFE/Month ($6.48 per kgal to $7.13 per kgal)				
	2022	2023	$ Change	% Increase
Base Service (min charge 5 kgal)	$32.40	$35.64	$3.24	10%
Debt Service 2017 Bonds	$2.77	$2.77	$0.00	
Debt Service 2020A Bonds	$5.15	$5.15	$0.00	
Debt Service 2020B Bonds	$2.74	$2.74	$0.00	
Capital Replacement Program	$2.95	$5.31	$2.36	80%
Base Portion of Bill per SFE/Month	**$46.01**	**$51.61**	**$5.60**	**12%**

Proposed 2023 Combined Wastewater & Water Rate Summary

Combined Water and Wastewater				
Typical customer pays per FE/Month:	2022	2023	$ Increase	% Increase
UERWA Customer	**$110.22**	**$121.28**	**$11.06**	**10%**

Proposed 2023 Wastewater & Water Impact Fees

Upper Eagle Regional Water Authority

DISTRICTS	RESIDENTIAL						COMMERCIAL - Based on Meter Size						
	Residential Base	Up to X Sq Ft	Thereafter per Sq Ft	Efficiency Unit (0.5 SFE)	Accomm Unit (0.35 SFE)	Swimming Pools per Sq Ft	¾" 1.5 SFE	1" 2.6 SFE	1½" 5.8 SFE	2" 10.3 SFE	3" 23.0 SFE	4" 40.9 SFE	6" 92.1 SFE
	Floor AreaTiers	Sq Ft in TIER	Price per Sq Ft	TIER TOTAL									
UERWA WSIF (Water System Impact Fee)	TIER 1	0 - 2,500	$5.96	$14,899			$20,426	$35,406	$78,982	$140,262	$313,206	$556,961	$1,254,185
	TIER 2	2,501 - 3,500	$7.46	$7,455									
	TIER 3	3,501 - 5,000	$9.31	$13,970									
	TIER 4	5,001 +	$11.65	+ overage									
If connecting to the Wastewater System the following Impact Fee assessment shall apply:													
ERWSD- Wastewater	0	N/A	$5.08			$2.20	$17,419	$30,192	$67,352	$119,607	$267,085	$474,946	$1,069,499
The following Other Impact Fee assessments may also apply:													
UERWA-Irrigation Water Impact Fee	$1.42 per sq. ft. of irrigation						Applies to new open areas, new parks and commercial irrigated areas						
West Edwards Sewer Encumbrance Fee	$1,100 per SFE						$1,100 per SFE						

2023 Inclusion, & Dedication FEES		
Eagle River Water & Sanitation District	**Upper Eagle Regional Water Authority**	
DEVELOPMENT FEE/ DEDICATION/ DEPOSIT	**RESIDENTIAL**	**COMMERCIAL**
Inclusion Fee	$1,100.00	
Treated Water Storage Dedication (New Tank)	Where no existing regional water storage is sufficient to serve the proposed development, an applicant will be required to construct and dedicate water storage sufficient to serve the needs of the development. See Treated Water Storage Dedication policy.	
Water Rights Dedication Review Deposit	$1,650.00	
Water Rights Dedication Cash-in-lieu	$66,063 per consumptive acre-foot of water*	

*Details to be discussed during work session.

Fund Balance Summary

Authority	Fund Balance
Beginning Balance	1,772,439
2022 Projection	2,190,984
2023 Projected Beginning Balance	3,963,423
2022 Carry Forward	(355,543)
2023 Contribution	1,062,736
2023 Projected End Balance	**4,670,616**

Budget Overview

2022 Operational Expense Budget Forecast

The 2022 operating budget was $10,781,061; the 2022 projected operating expenditures are $9,566,761, for a positive expense variance (actual spending less than budget) of $1,214,300, or 11.3% lower than budget. Notable decreased costs included delays on meter purchases and other supply chain ordering issues.

> Note: Total expenditures include operations, outsourced services, operating agreement, and *exclude* any expenditures related to debt service or debt issuance as those are typically capitalized and represented in our capital budgets

2023 Operational Expense Budget Summary

The 2023 operating budget decision item narratives describing each request are included as an attachment to this memorandum. The proposed 2023 operating budget is $11,089,457, an increase of $308,396 or +2.9% from the 2022 budget. As displayed below, the proposed 2023 budget by department, as it relates to 2022 budget, articulates the differences year over year.

Department	2022 Budget	2022 Projection	2023 Budget	YoY Budget Var	% Change
Administration & Community Relations	125,800	48,469	106,800	(19,000)	-15%

Engineering	754,515	620,636	754,806	291	0%
Field Ops	745,000	528,832	730,000	(15,000)	-2%
Finance	6,691,731	6,721,015	7,374,77	683,046	10%
Ops Tech	100,000	57,578	85,000	(15,000)	-15%
Utility Services	1,000,000	319,248	600,000	(400,000)	-40%
Water	1,364,015	1,270,983	1,438,074	74,059	5%
Total	**10,781,061**	**9,566,761**	**11,089,457**	**308,396**	**2.9%**

Below are notable changes from the original 2022 operating budget to the proposed 2023 Operating Budget, including the decision items and excluding debt. Departments not included in the list below projected minimal increases/decreases.

Administration and Community Relations

- Reduced General Operations line to reflect past year actual spends.

Engineering

- Reduced Water Rights Protection line from previous years due to Bolts Lake bonded legal fees versus operating in past years.

Ops Tech

- Repairs on Authority systems and snow removal lines were lower comparative to past years spending.

Utility Services

- Supply chain delays on meter purchases

Finance

- Increase to Operating Agreement with the District.

Overall Payroll, and Benefits

The total number of full-time employees for 2023 is proposed to increase by 2, to 133 full time positions. Budget impacts to FTE increases are $212,487. While 2 additional FTE are being requested this budgets cycle, there were needs equating to 12 overall FTE for the coming year. With a collaborative effort among the departments, the strategy was developed to concentrate on compensations and analysis study alignments and reduce the requests to allow for this opportunity.

- IT – Network Administrator
- Field Ops – Field Operator
- 2% Merit Increase
- 1% Cost of Living Adjustment

Request	FTE	Operating	Capital	Total
IT – Network Administrator	1.00	$137,030	$4,050	$141,080
Field Ops – Field Operator	1.00	$67,857	$3,550	$71,407
Merit Increase		$241,835		$241,835
Cost of Living Adjustment		$119,720		$119,720
Total	**2.00**	**$566,442**	**$7,600**	**$574,042**

The proposed budget includes a 2% merit and 1% a cost-of-living adjustment (COLA) as approved by the District, at the September Board meeting. The combined increase is equal to $361,555

Health and other benefit costs are projected to increase by 2.9%. It is proposed that the District shift the respective costs to the employee.

Total personnel costs (salaries and benefits) for 2023 are budgeted at $17,151,877 an increase of $1,784,078 from the 2022 projection, or 11.6%. Of this increase, $566,442 is dedicated to FTE decision items, including new FTE and Merit/COLA packages.

Capital Budget Overview

Summary

The 10-year Capital Budget Spreadsheet for 2023 and decision item narratives describing each request are included as an attachment to this memorandum. The total proposed 2023 capital budget is $7,671,533, including bonded projects. The totals include the following major capital projects:

Fund Type	Project Name	2023 Budget	Total Project Budget
Bond	Bolts Lake Reservoir	$425,000	$66,449,223
Bond	CRP- Wildridge BPS and PRV Improvements	$2,880,000	$5,000,000
Bond	CRP-Arrowhead Transmission Main Rehab	$700,000	$2,350,000
Bond	CRP-Upgrade PLC 6 @ ADWF-Master PLC	$1,500,000	$2,966,245
Capital	Water Treatment Master Plan	$133,333	$333,333

In addition to 2023 requests for funding, the proposed 2023 capital budget is also comprised of projected carryforwards and returned funds from 2022. While every effort is made to accurately forecast project timing, rollovers and returned funds occur for various reasons. The major

components are detailed below in Tables 1 and 2, respectively.

Table 1: 2022 to 2023 Budget Carryforward Summary

Fund Type	Department	Project Name	Estimated Carryforward	Description
Bond	Engineering	20-1-2-00-00-136 Bolts Lake Reservoir	297,229	Timing of invoices for major geotechnical investigation and water court
Capital	Engineering	20-1-2-00-00-994 Reservoir Storage Master Plan	13,699	Ongoing water rights billings
Bond	Field Ops	20-1-2-00-00-138 CRP-Arrowhead Transmission Main Rehab	1,301,104	Project delayed one year to investigate and design alternate alignment
Capital	Field Ops	20-1-2-00-20-100 Beaver Creek BPS3 Rehabilitation	56,400	Project held in order to combine all 3 Beaver Creek pump stations into one project
Bond	Ops	20-1-2-00-00-469 RTU System Upgrade	200,000	Project complete, remaining budget is for internal retrofit work
Bond	Water	20-1-2-00-00-039 CRP-Fenno Well House/Raw Wtr Conveyance	750,000	2022 Budget contemplated major work at well heads, 2022 work was investigation and easement acquisition
Capital	Water	20-1-2-00-00-135 Water System Emergency Power	147,587	Project dependent on Emergency Response Plan
Capital	Water	20-1-2-00-30-300 Cordillera East1 (Teacup) Tank Expansion	57,857	Project deferred to 2024/25 as control modifications addressed overflow issues
CRP	Water	20-1-2-00-00-044 CRP-ADWF Domestic Lift Station Rehabilitation	80,000	Project delayed due to vendor and supply issues

The total carryforward is estimated to be $2,903,876, where $355,543 come from operating revenues (fund balance) and $2,548,333 coming from available bond balances.

Table 2: 2022 Returned Funds Summary

Fund Type	Project Name	Estimated Returned Funds	Description
Bond	20-1-2-00-00-028 Traer Creek Tank Replacement	1,318,352	Project substantially complete as of 9/30/22
Bond	20-1-2-00-00-039 CRP-Fenno Well House/Raw Wtr Conveyance	709,720	Scope of work reduced based on investigation work
Bond	20-1-2-00-00-469 RTU System Upgrade	1,077,090	Project complete and under budget
CRP	20-1-2-00-00-375 CRP-ADWF Plant Repairs	114,309	Additional 120k budgeted for roof replacement, only a small portion completed
CRP	20-1-2-00-00-376 CRP-EDWF Plant Repairs	25,000	Under budget
CRP	20-1-2-00-00-999 CRP-Distribution System Capital Replacement Prog.	149,275	Under budget
CRP	20-1-2-00-00-377 CRP-	22,842	Under budget

	Wells/Misc Repairs		
CRP	20-1-2-00-00-024 CRP-OT Network Upgrade/Improvements	20,000	Unused account cancelled and returned, replaced with OTS Inventory

The total returned funds are estimated to be $3,436,588 comprised of $3,105,162 from Bond projects, and $331,426 from Capital and CRP.

Debt Service

As stated in the 2022 budget memo, the 2020 Water Revenue Refunding and Improvement Bonds were refunded. Based on a projected three-year capital outlay, it is anticipated that an estimated $15M revenue bond will need to be issued in Q2-Q3 2023.

UERWA	Bond Fund Balance
Beginning Balance	9,710,297
2022 Projection	(11,544,445)
2022 Projected Beginning Balance	(1,834,148)
2022 Carryforward	(2,548,333)
2023 Budget	(5,555,000)
2024 Budget	(2,555,000)
2025 Budget	(2,950,000)
Bond Balance	**(15,442,481)***

*Estimated total at this time, the projects will be drafted for review to the board prior to issuance on new bond proceeds.

Upper Eagle Regional Water Authority Operations Agreement

The Authority has contracted with the District to operate and maintain the water treatment plants in Avon and Edwards, the Berry Creek and Cordillera wells, the water distribution system, and to provide support services including accounting and billing, customer service, engineering, and other administrative activities such as board support and staff management. The Operations Agreement covers time, administrative costs, and office equipment and supplies associated with supporting the Authority's operations.

The Authority is billed monthly by the District based on an annually budgeted amount, and then the accounts are reconciled for each preceding year once the respective costs are properly allocated to each entity. In 2022, the operations agreement was increased from $4,700,000 to $6,750,000. The projected need for 2023 is $7,425,000. Listed below is an actual costing from 2013 through 2022 (projected). For many years this agreement has been negotiated at certain rates and budgets. At the end of the fiscal year, true ups commence, and the Authority pays what is needed. Within the total budget package, there is a $7,425,000 operations agreement

request for 2023. This represents a 10% increase over 2022 to capture increases in personal services and materials.

Routine operations overhead include office and operations facilities, supplies and management overhead. Its components are generally split on payroll allocation percentage basis for the Authority and District, respectively. Personnel expenditures are based on the estimated costs for the District staff time spend on Authority operations.

For historical perspective, Table 3 below illustrates the actual costs related to the Operations Agreement since 2013.

Year	Total
2013	$3,408,910
2014	$3,345,025
2015	$3,672,879
2016	$3,614,276
2017	$4,613,169
2018	$4,561,104
2019	$4,706,246
2020	$5,726,773
2021	$7,539,684
2022	$6,750,000
2023	$7,425,000

*Increases in 2023 are primarily driven by increases in personnel services, information technology (IT) expenses.

Consumer Price-Index

The official Consumer Price Index increase for all urban consumers in Denver-Aurora-Lakewood for December 2020 to December 2021 was 3.54%. The CPI increase from June 2021 to June 2022 (again, Denver-Aurora-Lakewood) was 8.2%. Currently, the CPI for all of 2022 is forecast to be 8.2% by the Office of State Planning and Budgeting and 7.9% by the Legislative Council.

Decision Items

Department	Type	Description	Capital	Bond	2023 Amount	2024 Amount	2025 Amount
Water	Capital	ADWF Membrane Roof Replacement	400,000		400,000		
Field Ops	Bond Project	Consolidated BPS 1,2, & 3 upgrade (move funds from BPS 2 & 3)		250,000	250,000	981,000	
Total			400,000	250,000	650,000	981,000	-

Decision Items Details

Name of Request: Beaver Creek BPS

Department: Field Operations

Problem or Opportunity:

Rehabilitation of pump station electrical and mechanical systems replaces assets before they fail, causing emergencies and potential water outages at the ski resort community at Beaver Creek.

The 2020 Distribution Master Plan included a detailed condition assessment and risk evaluation of all distribution system assets. In general, 40 plus year-old high elevation subdivision infrastructure was found to be at the end of its useful life. Beaver Creek 3 and 2 were both ranked 'extreme' risk. Individual projects were approved in 2020 for inclusion in the 10-year capital plan. Field Ops approached CIP asking why BPS1 was not a part of the scope – BPS1 was scored 3rd worse with a 'high' risk score.

Consequences of Problem:

Potential for failure of 'extreme' risk scored assets, emergency construction (especially in winter/ski season/irrigation season) could have environmental impacts.

Proposed Solution:

Project implements the findings of the Distribution Master Plan to reduce overall system risk, increasing reliability and redundancy. Consolidation of the three projects into one may benefit from increased economy of scale and better efficiency in design/permitting. Seasonal windows, aesthetics, and resort community location will provide unique challenges best suited to a cohesive approach system wide. PRV abandonment in other areas in Beaver Creek will be part of the scope of work, eliminating two assets and simplifying operations and removing two small pressure zones.

Costs:

Source: Bond

Costs	2023	2024
Design/Permitting	250,000	
Construction		2,500,000
Totals:	250,000	2,500,000

Name of Request: ADWF Membrane Roof Replacement

Department: Water

Problem or Opportunity:

The roof at ADWF is aging and needs to be replaced. A large portion of the roof is original to 1995 construction, the other portion is unknown. Roof leaks can cause moisture issues, mold, corrosion, damage sensitive equipment, and a roof leak above the process area could introduce rainwater directly into the treatment process. A portion of the roof was replaced in the rear of the building in 2022. The remainder of the roof was going to be included in the ADWF Administration Expansion project, but that project has been deferred several years; the roof continues to deteriorate and is leaking in multiple areas.

Consequences of Problem:

Continued leaking could damage equipment, lead to mold, corrosion, and other moisture-related issues in a Water Treatment Facility. Deferral of roof project will result in continued deferral of rooftop solar panels. The building is in an advantageous location and utilized a considerable amount of electricity.

Proposed Solution:

Replace aging and end of life infrastructure before it causes more costly damage and investment. New roof will permit installation of ballasted solar panels in sunny, south facing location to offset energy usage.

Costs:

Source: Capital

Costs	2023
Membrane Roof Replacement	400,000
Totals:	400,000

Proposed 2023 Budget Line Item Detail

Appendix A Attached

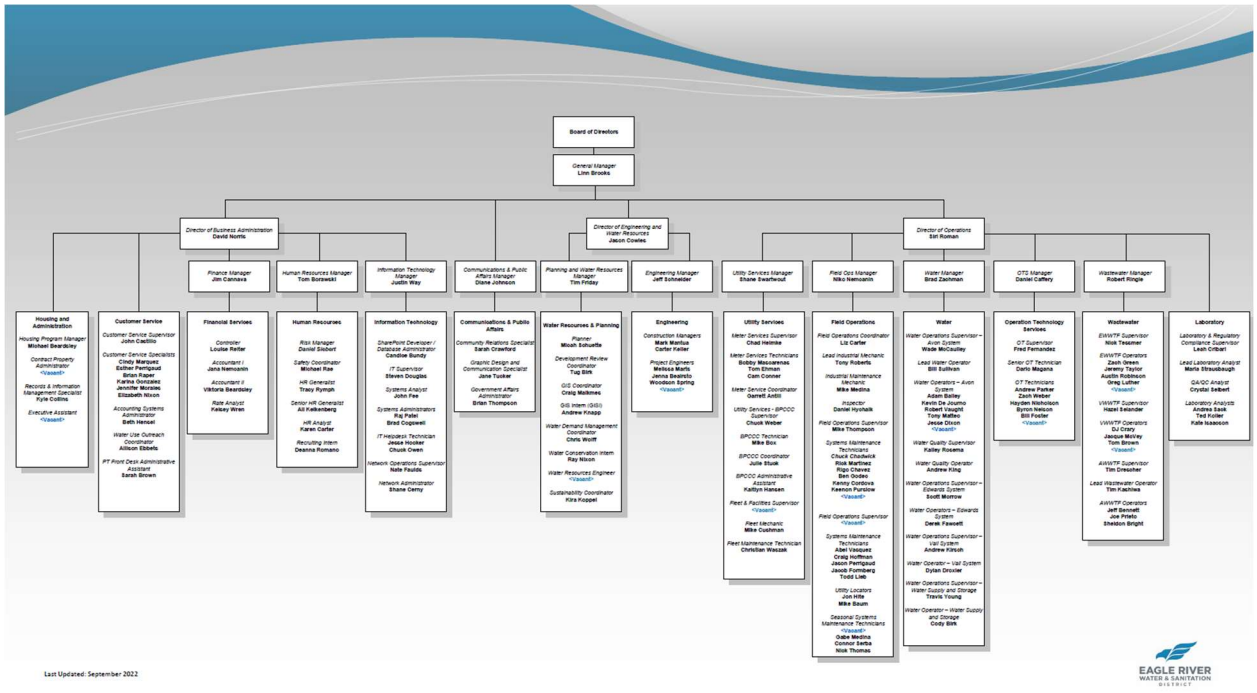
10 Year Capital Reference

Appendix B Attached

Capital Project Narratives

Appendix C Attached

Organizational Chart



Appendix A

Type	Department	Account	Sum of 2022 Budget	Sum of 2022 ending balance projection - 12/31/22	Sum of 2023 Budget
Bond Project	**Engineering**	20-1-2-00-00-028 Traer Creek Tank Replacement	2,398,352	1,080,000	-
		20-1-2-00-00-136 Bolts Lake Reservoir	6,333,685	6,036,456	425,000
	Field Ops	20-1-2-00-00-014 CRP- Wildridge BPS and PRV Improvements	120,000	120,000	2,880,000
		20-1-2-00-00-138 CRP-Arrowhead Transmission Main Rehab	1,617,104	316,000	700,000
		20-1-2-00-00-499 Edwards Transmission Line Phase 2	1,094,559	1,094,559	-
	Ops Tech	20-1-2-00-00-019 CRP-Upgrade PLC 6 @ ADWF-Master PLC	1,122,199	1,122,199	1,500,000
		20-1-2-00-00-469 RTU System Upgrade	2,577,090	1,500,000	50,000
	Water	20-1-2-00-00-039 CRP-Fenno Well House/Raw Wtr Conveyance	1,730,705	270,985	-
		20-1-2-00-00-490 ADWF Administration Expansion		4,246	-
Bond Project Total			**16,993,694**	**11,544,445**	**5,555,000**
Capital	**Engineering**	20-1-2-00-00-994 Reservoir Storage Master Plan	100,000	86,301	25,000
	Field Ops	20-1-2-00-00-398 Fire Flow Improvements (Share of AWWTF fireflow)	582,410	582,410	-
		20-1-2-00-20-001 Dowd BPS Upgrades	-	-	
		20-1-2-00-20-100 Beaver Creek BPS3 Rehabilitation	76,400	20,000	-
	Finance	20-1-2-00-00-900 CRP-Capitalized Construction Management	515,000	515,000	566,500
	Water	20-1-2-00-00-133 Water Treatment Master Plan	200,000	200,000	133,333
		20-1-2-00-00-135 Water System Emergency Power	147,587	-	50,000
		20-1-2-00-00-333 Zeta Potential Analyzer for Coagulant System	-		-
		20-1-2-00-30-001 Cordillera Autoflush Hydrants	-		-
		20-1-2-00-30-300 Cordillera East1 (Teacup) Tank Expansion	57,858	1	-
		20-1-2-00-30-301 - Cordillera West Tank 1 Rehabilitation		-	76,200
		20-1-2-00-20-101 - Beaver Creek BPS 1,2, & 3 Rehabilitation		20,000	285,500
		ADWF Membrane Roof Replacement			400,000
Capital Total			**1,679,255**	**1,423,712**	**1,536,533**
CRP	**Field Ops**	20-1-2-00-00-244 CRP-Pump Station Industrial Painting	32,058	50,195	75,000
		20-1-2-00-00-999 CRP-Distribution System Capital Replacement Prog.	300,000	150,725	300,000
	Human Resources	20-1-2-00-00-325 CRP-Safety/Security	-		10,000
	IT	20-1-2-00-00-024 CRP-OT Network Upgrade/Improvements	20,000	-	5,000
	Ops Tech	20-1-2-00-47-100 OTS Equipment Inventory		581	10,000
	Water	20-1-2-00-00-043 CRP-Water Storage Tank Improvements	150,000	150,000	180,000
		20-1-2-00-00-044 CRP-ADWF Domestic Lift Station Rehabilitation	80,000	-	-
		20-1-2-00-00-260 CRP-UERWA Analyzer Replacement Allowance	30,000	51,805	100,000
		20-1-2-00-00-375 CRP-ADWF Plant Repairs	220,000	105,691	100,000
		20-1-2-00-00-376 CRP-EDWF Plant Repairs	50,000	25,000	100,000
		20-1-2-00-00-377 CRP-Wells/Misc Repairs	50,000	27,158	100,000
CRP Total			**932,058**	**561,155**	**980,000**
Debt Service	**Finance**	20-1-5-00-00-067 C/P 2013A Water Bonds	150,000	150,000	165,000
		20-1-5-00-00-068 C/P 2013C Water Bonds	105,000	105,000	105,000
		20-1-5-00-00-069 C/P 2020 Revenue Bonds		-	150,000
		20-1-5-00-00-087 C/P Eagle Park Loan	104,611	104,611	110,312
		20-1-5-00-00-125 Interest Payable Eagle Park Loan		(23,530)	500
		20-1-5-00-00-150 Interest Payable 2013A Bonds		(0)	(0)
		20-1-5-00-00-151 Interest Payable 2013C Bonds		(0)	(0)
		20-1-5-00-00-152 Interest Payable 2020 Revenue Refunding Bonds		0	0
		20-1-5-00-00-153 Interest Payable 2020 Revenue Bonds		-	-
		20-1-9-00-25-230 Bond Interest Expense	2,124,910	2,124,910	2,114,050
		20-1-9-00-25-240 Paying Agent Fees	2,500	1,500	1,500
Debt Service Total			**2,487,021**	**2,462,491**	**2,646,362**
Operating	**Administration & Community Relations**	20-1-9-00-15-460 Consumer Confidence Report	7,000	-	7,000
		20-1-9-00-25-016 General Operations	20,000	-	1,000
		20-1-9-00-25-060 Communications	12,000	5,770	12,000
		20-1-9-00-25-080 Board Meetings/Travel Expenses	2,000	420	2,000
		20-1-9-00-25-090 Directors Fees	14,800	8,000	14,800
		20-1-9-00-25-190 General Legal	70,000	34,279	70,000
	Engineering	20-1-9-00-00-777 Water Demand Mgt Rebate Program	25,000	20,150	140,000
		20-1-9-00-15-270 Gauging Station Maintenance	63,654	63,654	66,837
		20-1-9-00-15-275 USGS Stream Gage Contracts	67,980	67,051	71,379
		20-1-9-00-15-290 Green Mtn Augmentation - USDA D of I	11,227	-	11,788
		20-1-9-00-15-296 RR Right of Way & Permits	2,000	1,990	2,000
		20-1-9-00-15-320 Wolford Mt. Augmentation Water - CRWCD	227,154	203,251	213,413
		20-1-9-00-15-330 Eagle Park Augmentation Water - CRWCD	25,000	27,039	28,390
		20-1-9-00-25-018 Engineering-Planning Dept.	10,000	-	10,000
		20-1-9-00-25-030 Water Rights Protection	250,000	178,000	150,000
		20-1-9-00-25-150 Consulting - Water Budgeting	40,000	29,950	30,000
		20-1-9-00-25-297 Sustainability Committee	8,000	7,888	8,000
		20-1-9-00-25-778 Water Demand Management	22,000	21,663	22,000
		20-1-9-00-35-202 Easements and Recording Fees	2,500	-	1,000
	Field Ops	20-1-9-00-15-515 FH Snow Removal	60,000	60,000	10,000
		20-1-9-00-18-500 BPS/PRV Repairs - Equipment	110,000	78,783	110,000
		20-1-9-00-18-510 BPS/PRV Building & Grounds	5,000	9,977	10,000
		20-1-9-00-25-019 Engineering - FO	10,000	-	10,000
		20-1-9-00-35-200 Electricity - lines,heat tape,PRV	10,000	10,000	10,000
		20-1-9-00-35-201 UERWA System Electricty	300,000	300,000	330,000
		20-1-9-00-35-500 Repair- Distribution System	250,000	70,072	250,000
	Finance	20-1-9-00-15-160 Eagle Park Reservoir Operating Assessments	238,661	238,661	262,527
		20-1-9-00-25-020 Miscellaneous	6,000	6,313	13,000
		20-1-9-00-25-110 Insurance Liability	127,070	140,912	145,000
		20-1-9-00-25-160 Audit	25,000	25,000	25,750
		20-1-9-00-25-180 Financial Consulting	10,000	25,129	20,000
		20-1-9-00-25-185 Eagle River Watershed Support	25,000	25,000	25,000
		20-1-9-00-25-300 ERWSD Admin. & Acct - Ops Agreement	6,235,000	6,235,000	6,858,500
		20-1-9-00-25-420 Eagle River Watershed Study USGS	25,000	25,000	25,000
	Ops Tech	20-1-9-00-15-400 OTS Hardware & Equipment	65,000	20,062	45,000
		20-1-9-00-15-408 MCC Maintenance & Cleaning	25,000	30,000	30,000
		20-1-9-00-15-409 OTS Support Services	10,000	7,516	10,000
	Utility Services	20-1-9-00-35-320 Meter Replacement/Equip Parts	1,000,000	319,248	600,000
	Water	20-1-9-00-15-120 ADWF Chemicals - Treatment	265,000	291,500	306,075
		20-1-9-00-15-200 UERWA Electricity	500,000	500,000	550,000
		20-1-9-00-15-350 Natural Gas	15,000	33,794	37,173
		20-1-9-00-15-411 UERWA Outside Lab Services	25,000	25,000	31,250
		20-1-9-00-15-500 ADWF Repairs - Equipment	50,000	50,000	50,000
		20-1-9-00-15-510 ADWF Repairs - Building/Grounds	75,000	25,000	35,000
		20-1-9-00-15-570 ADWF Sewer	41,000	41,000	41,000
		20-1-9-00-15-575 UERWA TOC Supplies	35,000	35,000	36,750
		20-1-9-00-15-580 Licensing & State Fees	6,300	6,300	6,300
		20-1-9-00-15-600 ADWF Chemicals-Lab Reagents	20,000	22,000	23,100
		20-1-9-00-15-780 Water Tank Cleaning	30,000	23,680	25,000
		20-1-9-00-15-781 Water Tanks Maintenance & Repairs	50,000	50,000	50,000
		20-1-9-00-15-790 Diversion Intake-Cleaning Maintenance	5,000	-	5,000
		20-1-9-00-16-110 EDWF Chemicals - Lab	5,000	5,500	5,775
		20-1-9-00-16-120 EDWF Chemicals - Treatment	45,000	49,500	51,975
		20-1-9-00-16-500 EDWF Repairs - Equipment	15,000	15,000	15,000
		20-1-9-00-16-510 EDWF Repairs - Building & Grounds	70,565	14,294	70,565
		20-1-9-00-16-570 EDWF Sewer	45,000	35,000	45,000
		20-1-9-00-17-120 LZ Wells Chemicals - Treatment	12,650	13,915	14,611
		20-1-9-00-17-500 LZ Wells Repairs - Equipment	15,000	15,000	15,000
		20-1-9-00-17-505 LZ Wells Buildings & Grounds	10,000	10,000	10,000
		20-1-9-00-17-570 LZ Wells Sewer	3,500	3,500	3,500
		20-1-9-00-25-010 Engineering	25,000	6,000	10,000
Operating Total			**10,781,061**	**9,566,761**	**11,089,457**
Grand Total			**32,873,089**	**25,558,564**	**21,807,352**

Appendix B - UERWA 10-Year Capital Plan

Account # & Description	Dept Groups	Project Type	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget	2029 Budget	2030 Budget	2031 Budget	2032 Budget	Total
20-1-2-00-00-131 Aerial Imagry Service Area Mapping	Customer Service	Capital		50,000									50,000
20-1-2-00-00-012 Traer Ck Tank Investigation/Litigation	Engineering	Capital											-
20-1-2-00-00-136 Bolts Lake Reservoir	Engineering	Bond Project	425,000	375,000	750,000	1,500,000	18,750,000	18,750,000	18,750,000				59,300,000
20-1-2-00-00-994 Reservoir Storage Master Plan	Engineering	Capital	25,000	50,000									75,000
20-1-2-00-00-007 Traer Creek Tank	Field Ops	Capital											-
20-1-2-00-00-014 CRP- Wildridge BPS and PRV Improvements	Field Ops	Bond Project	2,880,000	2,000,000									4,880,000
20-1-2-00-00-015 CRP-UERWA WST Interior/Ext Painting	Field Ops	CRP											-
20-1-2-00-00-138 CRP-Arrowhead Transmission Main Rehab	Field Ops	Bond Project	700,000										700,000
20-1-2-00-00-218 Paint Edwards Well House	Field Ops	CRP											-
20-1-2-00-00-244 CRP-Pump Station Industrial Painting	Field Ops	CRP	75,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	525,000
20-1-2-00-00-398 Fire Flow Improvements (Share of AWWTF fireflow)	Field Ops	Capital											-
20-1-2-00-00-499 Edwards Transmission Line Phase 2	Field Ops	Bond Project											-
20-1-2-00-00-999 CRP-Distribution System Capital Replacement Prog.	Field Ops	CRP	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	3,000,000
20-1-2-00-20-001 Dowd BPS Upgrades	Field Ops	Capital		52,920	476,280								529,200
20-1-2-00-20-101 - Beaver Creek BPS 1, 2, & 3 Rehabilitation	Field Ops	Capital	285,500	2,489,500									2,775,000
20-1-2-00-00-900 CRP-Capitalized Construction Management	Finance	Capital	566,500	515,000	515,000	515,000	515,000	515,000	515,000	515,000	515,000	515,000	5,201,500
20-1-2-00-00-325 CRP-Safety/Security	Human Resources	CRP	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	100,000
20-1-2-00-00-024 CRP-OT Network Upgrade/Improvements	IT	CRP	5,000	20,000	20,000								45,000
20-1-2-00-00-019 CRP-Upgrade PLC 6 @ ADWF-Master PLC	Ops Tech	Bond Project	1,500,000										1,500,000
20-1-2-00-00-469 RTU System Upgrade	Ops Tech	Bond Project	50,000										50,000
20-1-2-00-47-100 OTS Equipment Inventory	Ops Tech	CRP-Inventory	10,000										10,000
20-1-2-00-00-028 Traer Creek Tank Replacement	Water	Bond Project	-										-
20-1-2-00-00-039 CRP-Fenno Well House/Raw Wtr Conveyance	Water	Bond Project											-
20-1-2-00-00-041 CRP-EDWF Heater Replacement	Water	CRP											-
20-1-2-00-00-043 CRP-Water Storage Tank Improvements	Water	CRP	180,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	1,530,000
20-1-2-00-00-044 CRP-ADWF Domestic Lift Station Rehabilitation	Water	CRP											-
20-1-2-00-00-133 Water Treatment Master Plan	Water	Capital	133,333										133,333
20-1-2-00-00-135 Water System Emergency Power	Water	Capital	50,000										50,000
20-1-2-00-00-140 ADWF Membrane Roof Replacement	Water	Capital	400,000										400,000
20-1-2-00-00-238 CRP-ADWF Metcalf Ditch	Water	CRP		-		200,000							200,000
20-1-2-00-00-260 CRP-UERWA Analyzer Replacement Allowance	Water	CRP	100,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	370,000
20-1-2-00-00-333 Zeta Potential Analyzer for Coagulant System	Water	Capital		82,500									82,500
20-1-2-00-00-350 Eagle-Vail Tanks WST #1 & #2 Replacment	Water	Bond Project				250,000	4,000,000						4,250,000
20-1-2-00-00-375 CRP-ADWF Plant Repairs	Water	CRP	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
20-1-2-00-00-376 CRP-EDWF Plant Repairs	Water	CRP	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
20-1-2-00-00-377 CRP-Wells/Misc Repairs	Water	CRP	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
20-1-2-00-00-462 ADWF High Zone Production Imp.-Design A13	Water	Bond Project		180,000	2,200,000								2,380,000
20-1-2-00-00-490 ADWF Administration Expansion	Water	Bond Project		-		2,300,000							2,300,000
20-1-2-00-30-001 Cordillera Autoflush Hydrants	Water	Capital		75,000	75,000								150,000
20-1-2-00-30-300 Cordillera East1 (Teacup) Tank Expansion	Water	Capital		57,858	491,400								549,258
20-1-2-00-30-301 - Cordillera West Tank 1 Rehabilitation	Water	Capital	76,200	685,800									762,000
		Total	**8,071,533**	**7,473,578**	**5,367,680**	**5,605,000**	**24,105,000**	**20,105,000**	**20,105,000**	**1,355,000**	**1,355,000**	**1,355,000**	**94,897,791**

Appendix C

UERWA Capital Project Budget Narratives

Engineering

Project Name: Reservoir Storage Master Plan	Account Code: 20.1.2.00.00.994
Project Description: Project involves continued development and analysis of the District and Authority's water rights hydrology model, coordination with HSP on their Homestake System Model, coordination with the Eagle River Watershed Council Community Water Plan, and development of statement and purpose and need for permitting of future water supply project.	
Statement of Need: Water supply planning shows that the Authority will need to develop additional in-basin storage supplies to meet demands of additional growth and provide strategic reserve for uncertainty regarding climate change, growth projections, and increased administrative calls.	
2023 Budget Request: 25,000	
Total Project Budget: 175,000	
Basis of Estimate: Estimate is based upon consultant contracts, past history of spending, and anticipated level of effort for calendar year.	
Engineer: LRE, Helton & Williamson, Harvey Economics	**Project Manager**: Jason Cowles

Project Name: Bolts Lake Reservoir	Account Code: 20.1.2.00.00.136
Project Description: Capital fund for UERWA portion (75/25) for land purchase, permitting, design, and construction of a future water supply project.	
Statement of Need: Statement of Need: Needed to provide strategic in-basin storage to meet demands of future development, provide minimum in-stream flows, and hedge against uncertainty of climate change.	
2023 Budget Request: 425,000 (UERWA)	
Total Project Budget: 66,449,223 (UERWA)	
Basis of Estimate: 75% of actual land costs, rough conceptual estimates on design/permitting costs, and a conceptual engineers estimate.	
Engineer: Shannon-Wilson and Leonard Rice	**Project Manager**: Jason Cowles

Field Operations

Project Name: Wildridge BPS and PRV Improvements	Account Code: 20.1.2.00.00.014
Project Description: Replacement and rehabilitation for various distribution system assets in the Wildridge Subdivision, namely, tanks, pump stations, PRVs, and other appurtenances. The various facilities are at end of life cycle (40+ years old).	
Statement of Need: The high elevation, 40 year old subdivision infrastructure scored very high in the 2020 Distribution System Master Plan condition assessment both for consequence and likelihood of failure. This project was the first project output of the plan recommended. In fact, a budget was created for this project in 2017 due to operational concerns but was put on hold in favor of completing the master plan. The master plan served to reinforce the priority of this important project.	
2023 Budget Request: 2,880,000	
Total Project Budget: 5,000,000	
Basis of Estimate: 30% Design Cost Estimate	
Engineer: AE2S	**Project Manager**: Carter Keller

Project Name: Arrowhead Transmission Main Rehab	Account Code: 20.1.2.00.00.138
Project Description: Investigation, design, and construction of rehabilitated or replaced 16" transmission main feeding the Arrowhead WST. Scope also includes a valve vault near the tank to help with tank balancing with CVC in the Edwards low zone. Project originally budgeted in 2020, but another design alternative was explored, delaying implementation for a year.	
Statement of Need: Corrosive soils in the area led to a line break in 2019 on this critical infrastructure. In addition, much of the pipeline has seen excessive fill atop the pipe throughout the years.	
2023 Budget Request: 700,000	
Total Project Budget: 2,350,000	
Basis of Estimate: 30% Design Level Engineer's Estimate	
Engineer: Tetra Tech, Inc.	Project Manager: Mark Mantua

Project Name: CRP – Distribution Industrial Painting	Account Code: 20.1.2.00.00.244
Project Description: Annual account for small industrial painting projects at distribution system facilities such as PRV vaults and pump stations.	
Statement of Need: Annual account for painting various water system appurtenances. Industrial coatings are critical to extend the lifespan of various system assets due to corrosion.	
2023 Budget Request: 75,000	
Total Project Budget: Annual	
Basis of Estimate: Annual account, based on roughly 2-3 facilities per year	
Engineer: N/A	**Project Manager**: Tony Roberts/Niko Nemcanin

Project Name: CRP – Water Main Capital Replacement Program	**Account Code: 20.1.2.00.00.999**
Project Description: Annual account for small projects such as small mainline extensions, replacements, or hydrant relocations for the UERWA Water System.	
Statement of Need: Annual account for large purchase/small projects related to water mains and appurtenances in the Vail water system. Examples would include: working with developers/other entities on small projects, hydrant relocations, etc.	
2023 Budget Request: 300,000	
Total Project Budget: Annual	
Basis of Estimate: Annual account, based on potential expenditures	
Engineer: N/A	**Project Manager**: Niko Nemcanin

Project Name: Beaver Creek BPS 1, 2, 3 Rehabilitation	**Account Code: 20.1.2.00.20.101**
Project Description: Identified in the 2020 Water Distribution Master Plan and included due to high scores on both consequence and likelihood of failure. Aging assets in high elevation pump stations are in need of rehabilitation/replacement throughout the distribution system. Beaver Creek 3, 2, and 1 are the top three highest scoring pump station assets in the risk-cbased assessment. Originally budgeted as separate projects and only including BPS 3 and 2, the projects are combined and BPS 1 added to the scope.	
Statement of Need: Pumps condition and reliability scored poorly in the condition assessment portion of the 2020 master plan. In addition, a preliminary review revealed that the pumps run off of their curve, reducing their efficiency. Additional scope includes connection point for portable mobile generators in the event of a power outage. Scope includes replacement of pumps and motors and some piping and some minor building improvements.	
2023 Budget Request: 250,000	
Total Project Budget: 2,775,000	
Basis of Estimate: Conceptual master plan level estimate plus additional escalation and contingency.	
Engineer: Burns McDonnell	**Project Manager**: Woodson Spring

Finance

Project Name: CRP – Capitalized Construction Management	**Account Code: 20.1.2.00.00.900**
Project Description: As provided in the Authority Agreement, this account compensates the District for project management by the Engineering department for Authority projects.	
Statement of Need: Required per Authority Agreement and included in the base compensation.	
2023 Budget Request: 566,500	
Total Project Budget: Annual	
Basis of Estimate: Annual account	
Engineer: N/A	**Project Manager**: N/A

IT

Project Name: CRP – OT Network Upgrades/Improvements	**Account Code: 20.1.2.00.00.024**
Project Description: Annual account for large OTS purchases or small projects outside of expense budgets	
Statement of Need: Annual account, having funds on hand can help if a need arises mid-year	
2022 Budget Request: 5,000	
Total Project Budget: Annual	
Basis of Estimate: In house conceptual estimate	
Engineer: N/A	**Project Manager**: Fred Fernandez/Dan Caffery

Operational Technology

Project Name: ADWF Master PLC Upgrade	**Account Code: 20.1.2.00.00.019**
Project Description: Replacement of outdated and unreliable controls and communications network at the ADWF. Includes new server room located in the western portion of the plant, new fiber optic cabling throughout the plant, and new remote I/O and PLC equipment throughout for full redundancy and increased reliability. Total project budget originally 1,050,000 last year, small adjustment needed this year. Project timing adjusted from a fast track delivery to a more traditional design-bid-build approach.	
Statement of Need: Existing PLC is unreliable and has no room for future expansion. Server room relocation is required for ADWF Admin project; project timing led to its inclusion in this project.	
2023 Budget Request: 1,500,000	
Total Project Budget: 2,966,245	
Basis of Estimate: Guaranteed Maximum Price (GMP) Proposal from Hensel Phelps	
Engineer: Stantec, Inc.	**Project Manager**: Jenna Beairsto

Project Name: OTS Spare Parts Inventory	**Account Code: 20.1.2.00.47.100**
Project Description: Annual account for purchase of electrical and controls equipment such as motors, starters, VFDs, communication cards, etc.	
Statement of Need: Annual account for planned and potentially unforeseen purchases. Critical due to supply chain issues that could turn a simple card replacement into a months-long equipment outage.	
2023 Budget Request: 10,000	
Total Project Budget: Annual	
Basis of Estimate: Annual account, based on past expenditures	
Engineer: N/A	**Project Manager**: Daniel Caffery

Water

Project Name: Fenno Well House/Raw Water Conveyance	Account Code: 20.1.2.00.00.039
Project Description: Replacement of the Fenno Well House, a small treatment facility in Cordillera that does not meet current codes for electrical and chemical storage. Project includes replacement of the well house facility, improved contact time, new electrical (distribution pumps), piping, instrumentation and associated architectural and site work. Also included is the replacement of certain wells and appurtenances such as meters, electrical, and piping. Wellhouse is completed and the project team is slowly working on pulling, inspecting, repairing and replacing well infrastructure as needed. Difficult access to sites and renegotiation of easements in numerous production well locations delayed the implementation of the well phase.	
Statement of Need: Project was identified in previous 2009 Master Planning efforts and again in the recent 2020 Distribution Master Plan. Mostly related to code compliance, reliability, and replacement of aging infrastructure. Added to the scope is design work and construction of improvements at the 7 Fenno Wells due to pipeline condition, electrical concerns, and future RTU compatibility.	
2023 Budget Request: N/A – rollover from 2022	
Total Project Budget: 3,899,955	
Basis of Estimate: Actual design and construction costs for wellhouse plus 30% conceptual estimate for well improvements currently under investigation/design.	
Engineer: SGM, Inc.	**Project Manager**: Carter Keller

Project Name: Water Storage Tank Improvements	Account Code: 20.1.2.00.00.043
Project Description: Annual account for small tank rehabilitation/repair projects throughout the UERWA system's water storage tank inventory.	
Statement of Need: Periodic tank inspections often reveal potential sanitary issues such as separated overflow pipe joints, hatch issues, etc. The account was created in response to our 2019 CDPHE Sanitary Survey for the Vail System and represents a proactive approach to addressing storage tank deficiencies.	
2023 Budget Request: 180,000	
Total Project Budget: Annual	
Basis of Estimate: Annual account, based on 2019 WST expenditures and annual workloads	
Engineer: Western Water Solutions	**Project Manager**: Woodson Spring

Project Name: Cordillera West Tank 1 Rehabilitation	Account Code: 20.1.2.00.30.301
Project Description: In 2018, Arrowhead and Cordillera West 1 tanks were inspected by SGM. They are steel tanks which periodically require recoating to extend the project life cycle. It was determined at the time to push Cordillera West 1 another 5 years. The tank requires sandblasting, weld repairs as needed, and application of a new engineered coating system. In addition, the venting, hatches, and overflows often require modifications to bring them up to current CDPHE standards.	
Statement of Need: Originally budgeted in 2019 and deferred due to favorable condition at the time, it is critical to recoat steel WSTs on a periodic basis to ensure their integrity, mitigate failure and leakage concerns, and avoid large replacement costs.	
2023 Budget Request: 76,200	
Total Project Budget: 762,000	
Basis of Estimate: 2020 Distribution Master Plan estimate plus small escalation	
Engineer: Western Water Solutions	**Project Manager**: Woodson Spring

Project Name: ADWF Domestic Lift Station Rehabilitation	Account Code: 20.1.2.00.00.044
Project Description: The ADWF is served by a domestic lift station conveying its domestic wastewater to the Avon WWTF for treatment. The lift station is unreliable and needs to be rehabilitated.	
Statement of Need: Work was originally a part of the ADWF Administration Expansion project but due to deferring that work, a separate account was created to rehabilitate the domestic lift station as it is a more urgent need.	
2023 Budget Request: N/A – rollover from 2022	
Total Project Budget: 80,000	
Basis of Estimate: Vendor quotes and contractor quotes for installation	
Engineer: N/A	**Project Manager**: Mark Mantua

Project Name: Water Treatment Master Plan	Account Code: 20.1.2.00.00.133
Project Description: UERWA portion of a comprehensive master for water treatment and production facilities (plants, wells, raw water) plan using information contained in a detailed condition assessment, future growth, regulatory requirements, etc. Project originally budgeted for 2019 kickoff and due to challenges and management turnover, was contracted in 2022 and is scheduled to be completed in 2023.	
Statement of Need: The distribution system master plan was completed in 2020 which served as a background for system demands and identified the need for future production improvements. A comprehensive treatment/production master plan will help guide future capital needs in the water treatment/production category using the distribution plan as an input. A master plan will allow for better future capital spending data and guide the roughly $2M/year invested in the ADWF, for example, to optimize future capital outlay to best address operational challenges, growth, regulatory changes, and obsolete or aging infrastructure replacement.	
2023 Budget Request: 133,333	
Total Project Budget: 333,333	
Basis of Estimate: Carollo Engineering contract	
Engineer: Carollo Engineers	**Project Manager**: Jenna Beairsto

Project Name: Water System Emergency Power	Account Code: 20.1.2.00.00.135
Project Description: This project is an ongoing effort to bolster the water distribution system's resiliency in the event of an extended power outage. The multi-year project includes a study or priority of which improvements are required at which facilities and construction of items such as generators and generator connections/transfer switches.	
Statement of Need: This budget was first approved in 2018 to address the water distribution system's ability to function during an extended power outage. Two small projects were completed and some self performed work at four booster pump stations in the Authority are currently underway.	
2023 Budget Request: N/A – rollover from 2022	
Total Project Budget: 225,000	
Basis of Estimate: N/A – ongoing multi-year implementation	
Engineer: AE2S	**Project Manager**: Various

Project Name: UERWA Analyzer Replacement Allowance	Account Code: 20.1.2.00.00.260
Project Description: Annual account for replacement of various analyzers throughout the water treatment process, critical to regulatory compliance, process control and water production and data collection. This account is a consolidation of various small CRP line items over the years.	
Statement of Need: Analyzers are a critical appurtenance to water treatment facilities, controlling chemical dosing, pump rates, etc. They often require replacement or spare purchasing.	
2023 Budget Request: 100,000	
Total Project Budget: Annual	
Basis of Estimate: Annual account based on consolidation of several smaller accounts and vendor quotes	
Engineer: N/A	**Project Manager**: Wade McCaulley/Scott Morrow

Project Name: ADWF Plant Repairs	Account Code: 20.1.2.00.00.375
Project Description: Annual account for various small projects and large purchases required at the ADWF that do not fit in expense budgets but do not elevate to a large capital project.	
Statement of Need: Project was created by consolidating numerous smaller projects and gives operators more flexibility in responding to needs as they arise.	
2023 Budget Request: 100,000	
Total Project Budget: Annual	
Basis of Estimate: Annual account based on consolidation of several smaller accounts and vendor quotes	
Engineer: N/A	**Project Manager**: Wade McCaulley

Project Name: EDWF Plant Repairs	Account Code: 20.1.2.00.00.376
Project Description: Annual account for various small projects and large purchases required at the EDWF that do not fit in expense budgets but do not elevate to a large capital project.	
Statement of Need: Project was created by consolidating numerous smaller projects and gives operators more flexibility in responding to needs as they arise.	
2023 Budget Request: 100,000	
Total Project Budget: Annual	
Basis of Estimate: Annual account based on consolidation of several smaller accounts and vendor quotes	
Engineer: N/A	**Project Manager**: Scott Morrow

Project Name: Wells/Misc Repairs	Account Code: 20.1.2.00.00.377
Project Description: Annual account for various small projects and large purchases required at downvalley wells in Edwards and Cordillera that do not fit in expense budgets but do not elevate to a large capital project.	
Statement of Need: Project was created by consolidating numerous smaller projects and gives operators more flexibility in responding to needs as they arise.	
2023 Budget Request: 100,000	
Total Project Budget: Annual	
Basis of Estimate: Annual account based on consolidation of several smaller accounts and vendor quotes	
Engineer: N/A	**Project Manager**: Scott Morrow

Project Name: Cordillera East 1 (Teacup) Tank Expansion	Account Code: 20.1.2.00.30.300
Project Description: Identified in the 2020 Distribution Master Plan, this project involves expanding the small (3,000 gallon) tank with a larger tank to provide for more operational buffer. Control improvements to the facility and to the Cordillera East 1 BPS put the project on hold.	
Statement of Need: Cordillera East 1 tank is known as 'Teacup' due to its size. It was created to break pressure as water is pumped up the hill. It has been an operational issue for decades and is subject to frequent tank overflows, some of which can potentially damage property.	
2023 Budget Request: N/A – rollover from 2023	
Total Project Budget: 607,116	
Basis of Estimate: Conceptual cost estimate from master plan plus additional contingency/escalation	
Engineer: TBD	**Project Manager**: TBD

Project Name: ADWF Membrane Roof Replacement	**Account Code: NEW ACCOUNT**
Project Description: The Membrane Roof at the ADWF is at the end of its useful life and needs to be replaced. Numerous areas inside the building exhibit signs of leaking roof. A small portion was replaced in 2022 above the new server room but an entire roof replacement is required.	
Statement of Need: Roof replacement was initially planned to occur in conjunction with the ADWF Administration Expansion project, but the expansion project was put on hold in favor of other projects while the roof continues to deteriorate. The roof leaks in numerous areas and is at the end of its useful life.	
2023 Budget Request: 400,000	
Total Project Budget: 400,000	
Basis of Estimate: Vendor Quotes	
Engineer: N/A	**Project Manager**: TBD

Return to agenda

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M E M O R A N D U M

TO: Upper Eagle Regional Water Authority Board of Directors

FROM: Kristin Moseley

SUBJECT: DRAFT – Upper Eagle Regional Water Authority Resolution on Water Dedication Policy for 2023

DATE: October 19, 2022

Attached for review and discussion is a draft Upper Eagle Regional Water Authority Resolution on Water Dedication Policy for 2023. As you will note, we have included blanks in the pricing section for cash in lieu payments per consumptive acre foot of water so that the board can discuss potential increases given anticipated costs of construction of Bolts Lake. We have also added a new provision regarding a 25% deposit from Developers in order to receive Conditional Capacity to Serve Letter. Finally, we have proposed a change to the definition of summer and non-summer months in Paragraph 3(d) and (e) to reflect remaining historic consumptive use credits. We are not proposing a vote on the Resolution at the October meeting, rather a discussion of these concepts and direction for a revised Policy for consideration at the November meeting.

DRAFT

UPPER EAGLE REGIONAL WATER AUTHORITY
RESOLUTION ON
WATER DEDICATION POLICY

Effective January 1, 2023

WHEREAS, the Upper Eagle Regional Water Authority ("Authority") is a quasi-municipal entity authorized and empowered to supply water for domestic and other public and private purposes; and

WHEREAS, the Authority's mission is, among other goals and responsibilities, to provide efficient, effective, and reliable water to its service area, ranging from Eagle-Vail through Cordillera; and

WHEREAS, extensive redevelopment is occurring in the Authority's service area and such redevelopment is increasing the existing development density and water uses associated with certain redevelopment properties; and

WHEREAS, new development and water uses are occurring within the Authority's service area; and

WHEREAS, the Authority may expand its boundaries and commit to serve properties not currently within its service area; and

WHEREAS, to accommodate the increase in water demands caused by redevelopment projects and new water uses within or outside its current service area, and to continue to provide efficient, effective, and reliable water to its service area as it may from time to time be expanded, the Authority seeks to establish a uniform water dedication policy for third-party developers seeking (i) increased water service for the redevelopment of property within the Authority's service area or seeking new water service for properties not covered by existing taps or zoning, or (ii) water service for properties not currently within the Authority's service area ("Developers"); and

WHEREAS, such water dedication policy needs to protect the general welfare of the residents in the service area.

BE IT RESOLVED,

1. **GENERAL POLICY**. The Authority adopts the general policy of conditioning certain water service upon either a dedication of water rights or a payment of cash in lieu of water rights. This general policy shall apply (A) to all new development or redevelopment within its service area that will require an increase in water use or a new water use not covered by existing taps or zoning, and (B) to all properties not currently within the Authority's service area. For any redevelopment, this condition applies only to the difference between the projected

increased water demand and the pre-redevelopment water demand. For example, if the pre-redevelopment demand for a particular parcel of property is five consumptive acre-feet and the projected redevelopment water demand will increase demand to six consumptive acre-feet, the increase of one consumptive acre-foot will be subject to this water dedication policy. The increase may be as a result of increased density, increased landscaping, or any other change in use of the property that increases the water demand from the pre-redevelopment demand. There may also be situations where the water rights dedication or payment of cash in lieu is based on the diversion demand, not just the consumptive use of the water demand.

2. **DEDICATION OF WATER RIGHTS**. The dedication of water rights must provide the Authority with a dependable legal supply of water equal to one hundred and twenty percent (120%) of the water rights necessary to service the new or increased water requirements associated with the new development or redevelopment, or property not currently within the Authority's service area. Using the example in Paragraph 1, if the Authority agrees to accept a dedication of water rights, the Developer would be required to supply a dependable legal supply of water in the amount of 1.2 consumptive acre-feet (120% of the increase in demand of one acre-foot). All water dedication agreements or contracts between Developers and the Authority that provide water rights to the Authority under this policy shall be at the discretion of the Authority.

To the extent the Authority determines to accept a dedication of water rights, the following criteria shall be used in determining the type of water rights to be dedicated:

(A) Shares of stock in the Eagle Park Reservoir Company representing the right to the annual release of water from Eagle Park and/or Homestake Reservoirs.

(B) Water rights that could be used to enhance the yield of Eagle Park Reservoir.

(C) Interests in consumptive use credits that are already decreed for diversion and use at the Authority diversion points.

(D) Imported/transbasin water that is available for use in the Colorado River basin upstream of the Shoshone Power Plant.

(E) Other water rights that can be integrated into the Authority's water system or used to enhance existing exchanges without significant expense.

(F) All dedicated water rights must be owned in fee and cannot be based on a leasehold interest.

(G) There shall be a preference for in-basin or imported water.

(H) Only water rights senior to the 1922 Colorado River Compact shall be accepted.

3. **CASH IN LIEU OF WATER RIGHTS**. All water dedication agreements or contracts between Developers and the Authority that provide cash in lieu of water rights under this policy shall be at the discretion of the Authority, and shall be subject to the following additional conditions:

(A) The Authority has sufficient water rights to meet the new water service obligation.

(B) The Developer does not have access to the type of water rights that meet the Authority's criteria for acceptance of water rights.

(C) The water rights appurtenant to the land to be served have been previously severed.

(D) Cash payments based on 120% of the projected new or increased water use for summer months (defined as May through July each year) shall be valued based on the current market value of senior agricultural irrigation water rights, but shall not be less than the amount set forth on the attached Exhibit A.

(E) Cash payments based on 120% of the projected new or increased water use for non-summer months (defined as August through April each year) shall be valued based on the current market value of firm annual yield of in-basin storage, for example Eagle Park and Homestake Reservoirs, but shall not be less than the amount set forth on the attached Exhibit B.

(F) Cash payments shall be paid to the Authority to be used, at the discretion of the Authority, to develop and/or acquire additional in-basin or imported/transbasin water supplies for the Authority.

Notwithstanding the foregoing provisions of Paragraphs 3(D) and 3(E) regarding the percentage of the amount of the cash in lieu fee, the Authority may choose in its sole discretion to reduce the percentage of the cash in lieu fee to an amount less than 120% where the Developer provides evidence acceptable to the Authority that the landscape design and water use fixtures of the development provide efficiencies that demonstrate a water use that is less than the Authority's projected new or increased water use that is used to calculate the cash in lieu fee; provided, however, in no event shall the cash in lieu fee be less than 100% of the amount of the projected new or increased water use.

The Authority may also choose in its sole discretion to eliminate any cash in lieu fee for the portions of a Developer's property that require the temporary irrigation of native grasses or trees for a period of a maximum of two years if the temporary irrigation is metered separately from other water uses on the property and billed at the Authority's irrigation rate.

4. **PAYMENT OF COSTS**. All payment of costs regarding water dedication agreements or contracts between Developers and the Authority under this policy shall be subject to the following conditions:

(A) In addition to the dedication of water rights under Paragraph 2 or cash payments under Paragraphs 3(D) and 3(E), Developers shall be required to pay the Authority for all legal, engineering, and other costs incurred or which may be incurred by the Authority to evaluate and/or adjudicate any augmentation plan or other water court application, if necessary, to provide new or increased water service to any Developer's property.

(B) Where an engineering or legal evaluation is required by the Authority to implement the terms of this Policy, the Developer will be required to deposit with the Authority an initial fee of no less than $5,000 to pay for the cost of such evaluation. The initial deposit shall be used to pay the costs of staff, legal consultants, engineering consultants, and other expenses that may be incurred by the Authority. These costs are separate and distinct from any other Tap Fees and other charges applicable to the development. This cost reimbursement charge is not related or credited to any other fee or the Authority. Deposit amounts in excess of the actual cost of the analysis will be refunded to the proponents of the development. A good faith effort will be made to generally account for the costs incurred, but the Authority shall not be obligated to provide a specific accounting of costs, but only a generalized estimate.

(C) Developers requiring an Ability to Serve Letter, as defined in **C.R.S § 29-20-304**, as evidence of sufficient water rights from the Authority for a land use permit application shall pay a refundable cash in lieu deposit to the Authority that is equal to twenty-five percent (25%) of the estimated cash payment under Paragraph 3. Following the receipt of such payment, the Authority will issue a Conditional Capacity to Serve Letter to the relevant government authority that demonstrates the Authority will serve the project once certain conditions have been met, including the payment in full of cash in lieu fees. The cash in lieu deposit will be credited toward the final cash in lieu fee payment, which shall be calculated at the the current value of water rights set forth in Paragraph 3 at the time of payment of the full cash in lieu fees. Following the payment in full of cash in lieu fees and the execution of a Water Service Agreement, the Authority will provide the Developer with an Ability to Serve Letter as defined in **C.R.S § 29-20-304**. In the event water service is no longer required or desired for the Developer's property, any refund of the cash in lieu deposit shall be paid within 90 days written notice to the Authority. Any unpaid reimbursement costs owed to the Authority shall be withheld from the refund. The Authority will not refund a cash in lieu deposit once the property to which water service has been extended has obtained land use approval unless such land use approval is revoked or otherwise terminated by the relevant governmental authority.

(D) In the event water service is no longer required or desired for Developer's property, any refund of cash in lieu payment previously paid shall be at the sole discretion of the Authority. Where the Authority decides in its sole discretion to refund a cash in lieu payment, the Authority may charge a cancellation fee. The Authority will not refund a cash in lieu payment once the property to which water service has been extended has obtained land use

approval unless such land use approval is revoked or otherwise terminated by the relevant governmental authority.

5. **Applicability of Policy**. Upon the referral from the Town of Avon or Eagle County for an ability to serve commitment, the Authority staff shall determine whether this policy is applicable to any property that is currently within the Authority's service area and that is being developed or redeveloped.

Approved this ___ day of _____, 2022 by a vote of __ in favor and __ opposed.

By: _____
George Gregory, President and Board Chair

Exhibit A

The cash payments for the summer months (defined as May through July of each year) under paragraph 3(D) of the Water Dedication Policy shall not be less than _____ dollars ($_____) per consumptive acre foot of water.

Exhibit B

The cash payments for the non-summer months (defined as Augustthrough April of each year under paragraph 3(E) of the Water Dedication Policy shall not be less than _____ thousand dollars ($_____) per consumptive acre foot of water.

Return to agenda

UPPER EAGLE REGIONAL
WATER AUTHORITY

Fiscal Year 2022
Quarterly Financial Report
For the 3rd Quarter Ending September 30, 2022

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1. Quarterly Financial Report Cover Memo
2. Net Income & Budget Comparisons
3. Revenue Comparisons
4. Bond & Cash Balances

UPPER EAGLE REGIONAL
WATER AUTHORITY

To: Board of Directors

From: Jim Cannava, Finance Manager

Date: October 18, 2022

Re: Quarterly Financial Reports - YTD September 30, 2022

The 3rd quarter 2022 financial reports are attached. Operating revenues are tracking 6.8% under budget and 5.1% greater than YTD 2021. Revenues are under budget due to customer credits in previous periods and summer consumption is down 9% year-over-year. Operating expenses are tracking 17.24% under budget and 9% greater than YTD 2021.Expenses are under budget due to the timing of meter purchases, system repairs, and plant repairs and maintenance. Meter purchase are expected to be delayed until 2023. System repairs and plant repairs and maintenance are expected to be consumed by year end. Bond funds are projected to be consumed by year end. The process to secure a bond to fund current and planned bond projects is scheduled to begin in Q4.

Respectfully:

Jim Cannava

Finance Manager

Eagle River Water and Sanitation District

UPPER EAGLE REGIONAL WATER AUTHORITY

Net Income & Budget Comparisons

UERWA

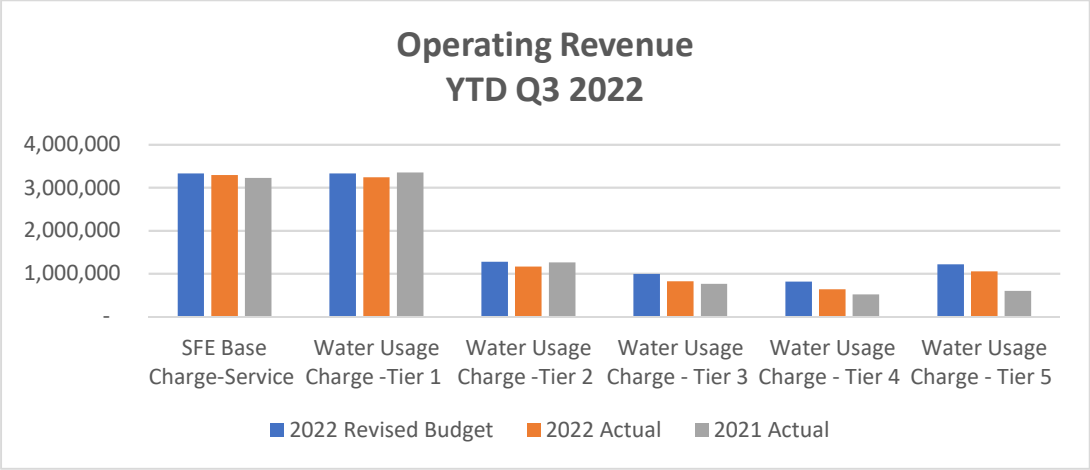
Operating	Annual Budget	YTD 2022 Q3	YTD 2021 Q3
Revenue	$12,846,831	$10,203,933	$9,829,904
Expense	$10,781,061	$6,738,939	$6,197,769
Net Income	**$2,065,770**	**$3,464,994**	**$3,632,135**

Non-Operating	Annual Budget	YTD 2022 Q3	YTD 2021 Q3
Revenue	$3,606,076	$3,337,471	$2,580,904
Expense	$5,825,534*	$2,641,313	$3,194,024
Net Income	**($2,219,458)**	**$696,158**	**($613,120)**

Net Income	***($153,688)****	***$4,161,152***	***$3,019,015***

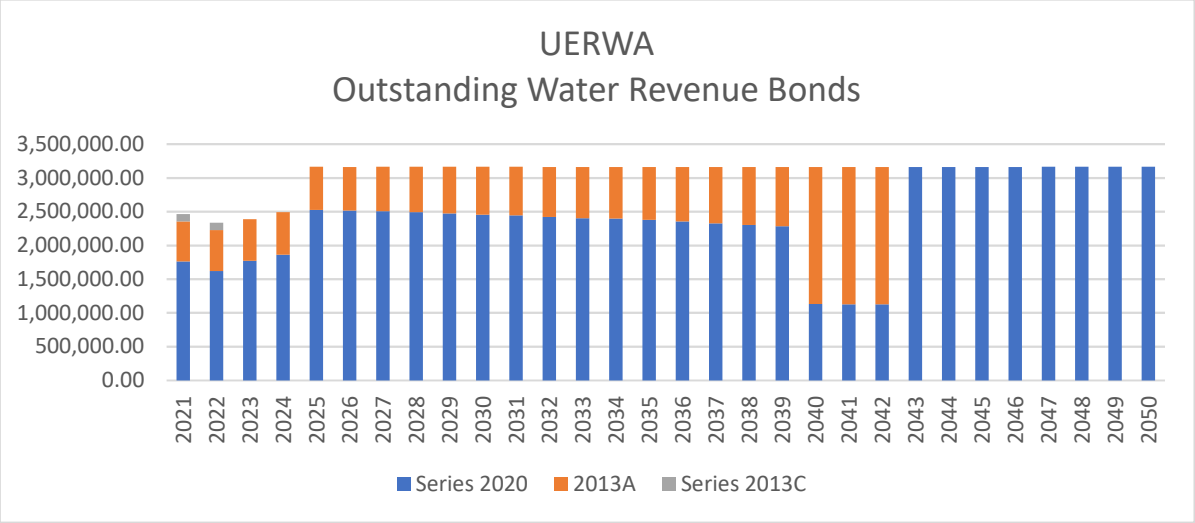
includes 2021 capital carryforward

Revenue Comparison



- Total Water Service to Customers Revenue is 6.8% under budget YTD & 5.1% over YTD 2021
  - Base Fees are 1.% less than budget due to customer credits for previous periods
  - Summer tier revenues are down due to a 9% consumption decrease year-over-year
- Capital Replacement Base Fees are tracking with budget
- Water Service Impact Fees are $576K YTD, $101K under YTD 2021

UPPER EAGLE REGIONAL
WATER AUTHORITY



Bond Balances & Cash

UERWA

Bond Funds	Annual Budget	YTD 2022 Q2	YE 2021
Beginning Balance	7,143,902	7,143,902	22,448,842
Expense	16,468,539	6,729,032	15,304,940
Bond Balance	**(6,758,242)**	**414,870**	**$7,143,902**

- The negative bond ending balance illustrates the need for a bond as planned.

Bond Projects	Budget	Actual	Remaining Budget
Traer Creek Tank Replacement	2,398,352	690,005	1,708,348
Fenno Well House	1,730,705	392,495	1,338,209
Bolts Lake Reservoir	6,333,685	3,009,396	757,894
Arrowhead Trans Main Rehab	1,617,104	134,711	1,482,393
RTU System Upgrade	2,577,090	1,490,225	1,086,865
Edwards Transmission Line Phase 2	1,094,559	1,012,201	82,358
Total	**15,751,494**	**6,729,032**	**6,456,067**

- Total Outstanding Debt: $90,838,452

UERWA	2022	2021	2019
Cash Balance	15,814,289	21,742,153	6,779,303

Cash balance fluctuations are primarily due to bond proceeds and expenditures.

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

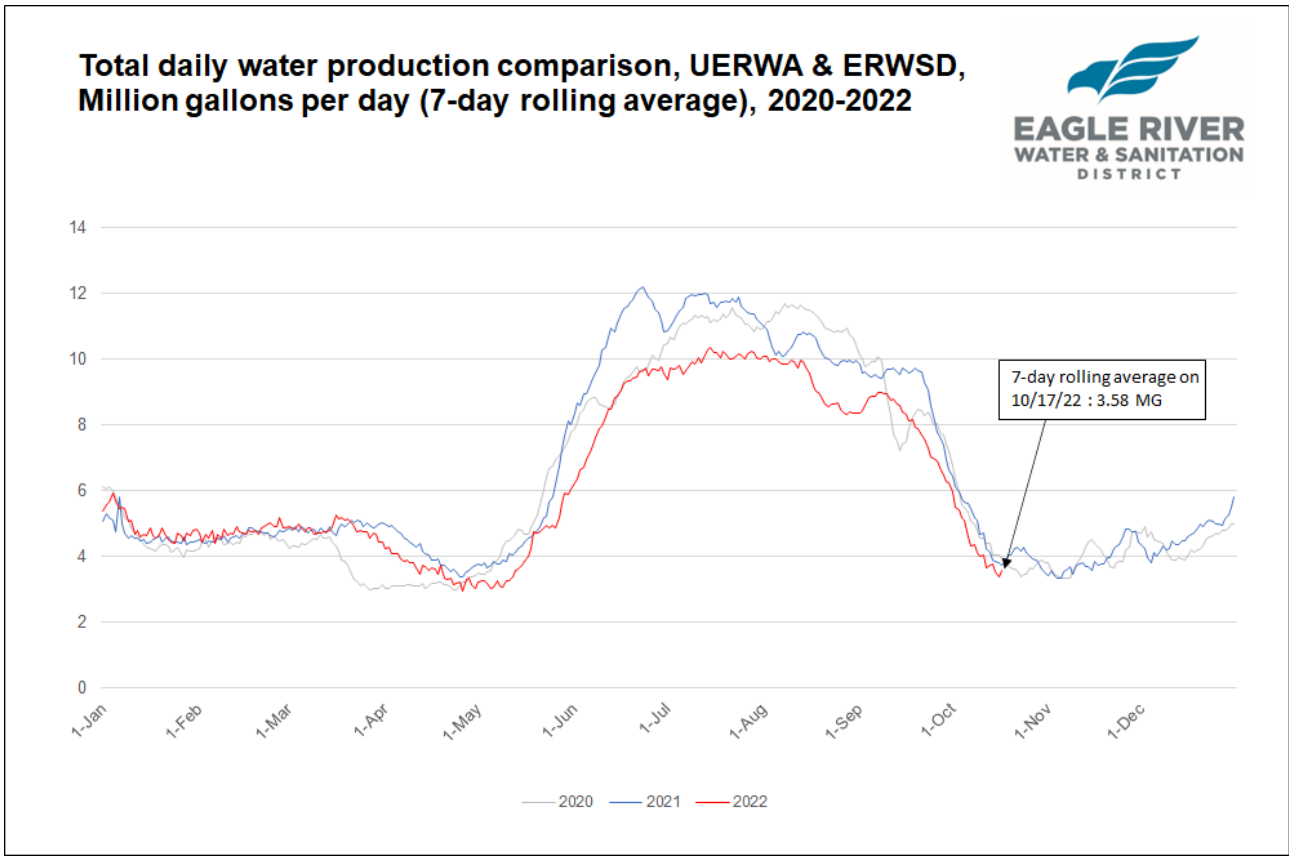
UPPER EAGLE REGIONAL WATER AUTHORITY

OPERATIONS MONTHLY REPORT
OCTOBER 2022

WATER

Brad Zachman

The system-wide water production comparison was updated through Oct. 17. System demand has dropped to seasonal lows, which has allowed Water Operations staff to start a variety of planned maintenance projects, including routine equipment maintenance at the treatment facilities.



The Avon Drinking Water Facility (ADWF) was taken out of service on Oct. 11 and will remain offline until mid-Nov. for the completion of a planned capital improvement project that will increase fire flow capacity to the Avon Wastewater Treatment Facility. The work at ADWF will include installation of piping infrastructure that will allow water to be downloaded during a fire flow event from the Avon high pressure zone to the Avon low pressure zone.

Water downloading began from the District system into the Authority's service area on Oct. 5 and will continue through mid-November. Water uploading will begin in early December and will

continue through late-spring 2022. The annual intersystem transfers are on pace to be at the required net-zero balance by April 30, 2022 (the end of contract year).

District staff members coordinated with Vail Resorts to prepare the Golden Peak snowmaking pump station for seasonal startup and operation. All District startup responsibilities are complete.

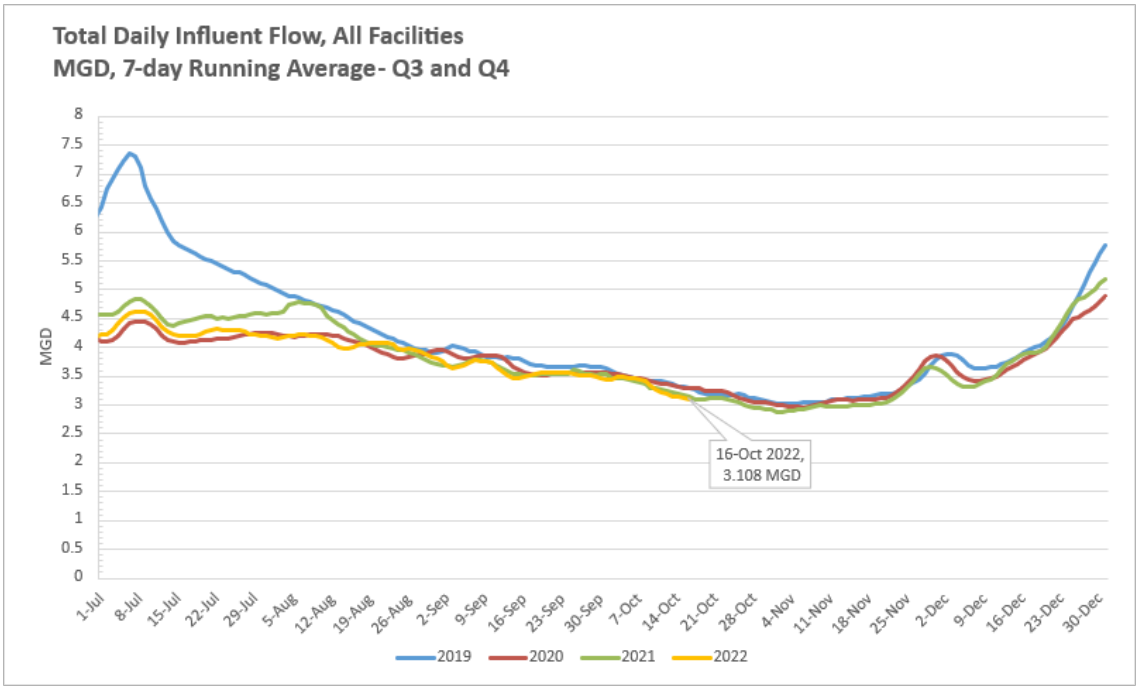
LABORATORY & WATER QUALITY

No update.

WASTEWATER

Rob Ringle

Influent wastewater (WW) flow and organic load typically stabilizes and gradually declines through October and early November; this year has closely matched that trend. Annual minimum influent flows and loading are expected in early November.



All WW facility staff groups are taking advantage of this time of lower loading to complete significant maintenance efforts. Vail WW staff recently dewatered and cleaned one of the large secondary process basins. This is intended to maintain optimal treatment performance and improve treatment efficiency through reduced aeration system demand. The basin will remain offline until loading increases around the holidays. Vail WW staff are involved in coordination efforts related to the Master Plan Improvements project, which broke ground in early October. Staff

are also participating in the review of the 90% progress deliverables for the phase II work, which will bring more significant operational adaptations in 2023.

Avon WW staff continue to make contributions to the ongoing Nutrient Upgrade Project construction effort. This has recently included dewatering and cleaning the equalization basins to facilitate installation of a new basin mixing system, and changes to the primary clarifier wasting operations to facilitate piping connections. Staff are preparing to commission the new equalization and aeration basin #1 systems in November.

Edwards WW continues to pilot operation in the anaerobic, anoxic, aerobic (A2O) process configuration, as intended to provide data related to enhanced phosphorus and nitrogen removal for the WW Master Plan Update effort. Staff have also successfully optimized the operation of the autothermal thermophilic aerobic digestion (ATAD) solids handling system to reduce the concentration of phosphorus in the liquid recycle stream. In addition to these process optimization efforts, staff recently completed a comprehensive cleaning of the rotary drum thickener system. Staff also rebuilt a transfer valve related to the ATAD system.

EWW Staff replacing critical ATAD transfer valve.

FIELD OPERATIONS

Niko Nemcanin

Annual summer field system maintenance continues. Collection system jetting (five-year rotation) is completed.

On Sept. 20, a horizontal directional drilling contractor hired by Xcel Energy to install gas main, drilled through a section of sewer main on Metcalf Rd. The crown (top portion) of the main was damaged; all wastewater was contained in the pipe and there was no sanitary sewer overflow. A

Contractor was hired to set up sewer bypass pumping and to repair sewer main. Work on replacing 10’ of sewer main was completed on Sept. 29 and all costs will be reimbursed to the District.

On Oct. 8 a contractor working on sewer service installation for 42 Red Spruce Ln in Beaver Creek damaged the water service line for 46 Red Spruce Ln. FO on-call personnel did an emergency shut down, isolated the leak, and restored the water service. This emergency was used to investigate the water main location in the area and update our maps. Since 46 Red Spruce Ln property is also being developed, FO worked with contractor to tap water services for 46 Red Spruce Ln while the road was open.

On Oct. 12 while excavating for 46 Red Spruce Ln water services, the saddle was damaged by the same contractor. FO responded, performed another emergency shut down and replaced the saddle. The next day all taps were completed and the trench was backfilled.

Oct. 8 damage

Oct. 12 damage

Oct. 12 repair

Oct. 13 new water service taps completed

FO supported various projects for other District departments, Eagle Park Reservoir improvements, R4 well electrical conduits repair, and construction review team investigations.

New technology for roots growth suppression, Root X, will be tested on Oct 21. If successful it will be purchased and used in the future. This technology should not affect wastewater treatment operations.

CIP assisted with a small valve installation near Hillcrest Drive and Lake Creek Village Drive to allow for better isolation of water mains in the area, specifically in the event of a failure beneath the Eagle River. After a protracted permitting process with Eagle County, the valve was excavated on Oct. 5 for shutdown/tie in and backfill on Oct. 6.

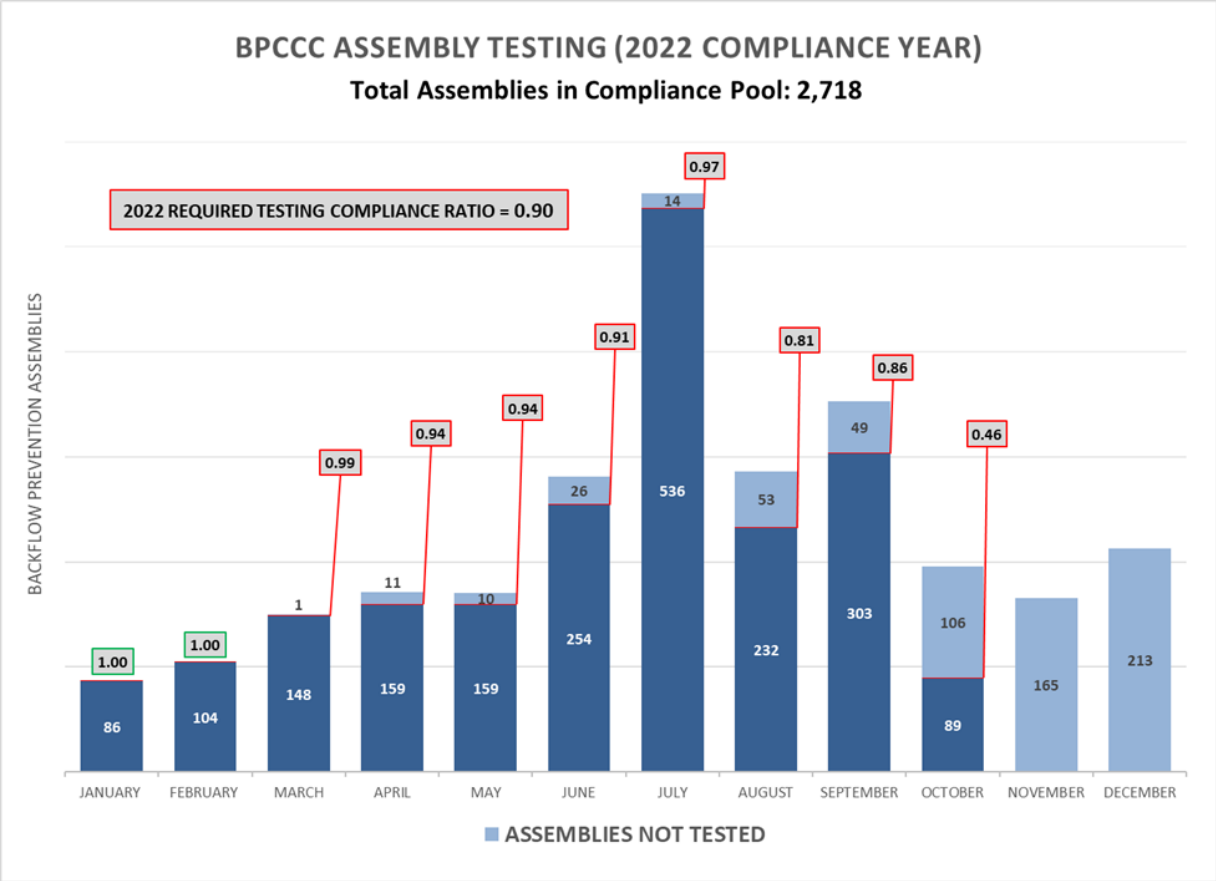
UTILITY SERVICES

Shane Swartwout

BPCCC Program Compliance Status

The BPCCC team is busy working with customers on the remaining backflow prevention assemblies that need to be tested to reach compliance by end of the year. All the past due customers are currently being fined and staff is now scheduling testing in-house of these assemblies.

Staff has recently mailed approximately 260 letters to customers who have backflow prevention assemblies that were due for testing in November and December requesting early testing, preferably by the end of October. This effort has reduced the number of assemblies that need to be tested in the last two months of the year.



Meter Services – Advanced Metering Infrastructure Status (Updated 10-18-2022)

Report Date:	10-18-2022

AMI SYSTEM STATUS	ERWSD	UERWA	TOTAL
(1) Total No. of Meters	3191	6829	10020
(2) No. of AMI Meters	3080	5664	8744
(3) System Percentage of AMI Meters	97%	83%	86%
Meters Remaining to Reach 100% AMI	111	1165	1276

The meter services team is steadily working on upgrading the remaining outdated meters. To date, there are currently only 111 meters left to reach 100% AMI in the District.

Fleet and Facilities

The fleet team is preparing District vehicles and equipment for government surplus auction. At this time, there are currently 8 vehicles that meet replacement criteria and will be auctioned next month.

ENGINEERING

Jeff Schneider

WATER PROJECTS

Radio Telemetry Unit (RTU) System Upgrades Carter Keller

General Project Scope: This project is a systematic approach to install standardized communication equipment to increase the reliability of the telemetry system throughout the distribution system (82 sites) and develop a standard (i.e., non-proprietary) telemetry platform to allow competitive pricing for upgrades, replacement, and system maintenance. Implementation is anticipated over a three-year period with a highly detailed sequence and schedule to limit distribution system disruptions.

Project Update: Fall commissioning is complete for the 2022 season. All 84 booster pump stations, tanks, and well sites that are located in the District and Authority are now communicating through the upgraded radio system. We are happy to report substantial completion of this multi-year multi-phase project that was initiated in 2013.

Currently work is underway to demo the last of the old radio system in the Cordillera area. Project closeout will continue and should be completed by the end of the 2022 year.

Traer Creek Water Storage Tank Mark Mantua

General Project Scope: This project consists of the replacement of the Traer Creek Water Storage Tank. In addition to the tank replacement, the scope includes piping, appurtenances, and selective replacement of identified equipment including the RTUs and control cabinets.

Project Update: Repairs on the poorly consolidated concrete present in the dome roof is complete. All former leaks have exhibited no further water infiltration. Tank disinfection was completed in compliance with American Water Works Association guidelines. Earthwork and site restoration is complete, and the tank is ready for service. A walk through was conducted with Traer Creek Design Review Board representatives on Oct. 13 and all work has received final acceptance. To better align with operational conditions, District staff decided to fill the tank on Nov. 28, after the completion of the construction project at Avon Drinking Water Facility. The project is complete.

Avon Drinking Water Facility (ADWF) PLC Upgrades Jenna Beairsto

General Project Scope: This project includes replacement of two of the programmable logic controllers (PLCs) at ADWF. Additionally, a new server room will be constructed within the facility. All programming and PLC logic will be reverse engineered to determine required updates and improvements associated with the modification and replacement of the existing PLCs.

Project Update: Hensel Phelps has been contracted to complete this work. . Construction of the server room is expected to start after the first of the year. Procurement and submittal review is underway. The installation of the new PLCs and testing and commissioning is scheduled for Fall of 2023.

Fenno Wellhouse and Raw Water Conveyance Jeffrey Schneider/Carter Keller

General Project Scope: The project consists of complete replacement of a small treatment facility in Cordillera that treats water from seven groundwater wells and pumps into the distribution system. The previous facility did not meet electrical code, had some safety concerns, and was generally at the end of its useful life. Improvements to the wells and raw water piping are also included in this project.

Project Update:

We are currently working with homeowners, a local HOA, and golf course staff on acquisition of additional easements at wells F5 and F7. After easements are obtained the wells will be pulled and inspected in a similar fashion. Well F3 has been assessed and it was found that the pump, motor, and wire need to be replaced. The equipment was ordered and installed on Oct. 7 and was put back into production after checkout was completed. Following the well assessment and repair work, permanent improvements to the raw water conveyance consisting of piping, controls, and electrical will be designed based on the findings of the current effort.

Water Production and Treatment Masterplan Jenna Beairsto

General Project Scope: The Masterplan will be a wholistic look at all production and treatment facilities system-wide including treatment plants and wells. The goal is to do a thorough risk-based analysis and provide a roadmap for future capital project implementation in light of threats from climate change, low stream flows, wildfires, etc. along with a detailed condition assessment of existing assets.

Project Update: Carollo is working on revisions to chapter 1 and drafting of chapters 2 and 3 of the masterplan report. The master planning team has begun building a specialty model (Blue Plan It) to better analyze the entire water system between the District and Authority. A risks and threats workshop was held on Sept. 27 where the team discussed vulnerabilities to the water system. The district is working on collecting additional water quality data on some of the wells in the system.

Avon Wastewater Treatment Facility (WWTF) Fire Flow Improvements Woodson Spring

General Project Scope: The Avon WWTF Fire Flow Improvements consist of two major components. The first is installation of 1,100 linear feet of 12" water main down Millie's Lane and into the Avon WWTF site. The second is modifications within the Avon Drinking Water Facility (DWF) to transfer water from the high zone to the low zone. The project will bring the Avon WWTF into compliance with fire flow requirements and address a long-standing deficiency.

Project Update: Pipeline work resumed the week of Sept. 19, with some interruptions due to constrained site conditions and utility conflicts. The 10" hydrant line was tested the first week of Oct. An additional 285 feet of water main was installed across the northern AWWTF property, and is currently under testing. A shutdown for water main tie-in is scheduled for the week of Oct.24. Demolition has begun for installation of the new pressure relief valve (PRV) in the ADWF.

WASTEWATER PROJECTS

Avon Wastewater Treatment Facility (AWWTF) Nutrient Upgrades Melissa Marts

General Project Scope: The Avon WWTF requires upgrades to meet Regulation 85, which requires a reduction of the concentrations of nitrogen and phosphorus in the effluent. The scope of this project includes the following: addition of 0.6 million gallons of aeration basin capacity, a new secondary clarifier, structural modifications to the existing aeration basins to remove the existing double-tees and replace with a building structure, a new odor control study and system, and other improvements throughout the facility. This project also includes improvements identified in a 2017 condition assessment in other process areas throughout the facility.

Project Update: The tower crane was disassembled and removed from site after the completion of the building structure in Sept. Moltz tied in the return primary sludge line to the new sewer line on the north side of the aeration basins. Asphalt is being removed from the front of the building in preparation for grading and paving. Work is progressing on upgrades to the equalization basin mixing, pumping, and access. The Town of Avon Planning and Zoning unanimously approved the materials and variance requested to install a Trex fence around the entire facility perimeter. We are working on designing some 'post completion' activities such as a retaining wall replacement above the bike path and sand oil separator for the mechanic shop drain, both are scheduled for winter installation along with the Laboratory Improvements project.

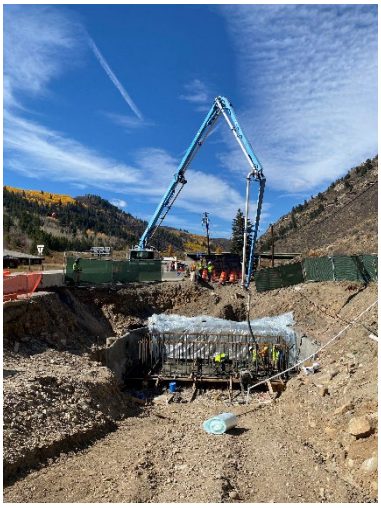
Dowd Junction Collection System Improvements Jenna Beairsto

General Project Scope: The project consists of four major components, all of which are at the end of their useful lives: the aerial interceptor crossing at Dowd Junction; Lift Station 4, which conveys all of Minturn's wastewater; the aerial interceptor crossing at the Minturn Road bridge; and the force main downstream of Lift Station 4. The project will also include capacity for growth in its respective service areas, most notably the Minturn area improvements.

Project Update: *West Vail Interceptor Aerial Crossing:* The new sewer line is actively flowing. The Contractor successfully demolished the existing pipe and piers in September. The Contractor is working on site restoration, final punch list and decommissioning from the site. All work will be complete by the end of the month.

Lift Station 4 and Force Main Replacement: This project combines three packages of work into one large project. Package A includes the lift station 4 replacement, package B is replacement of the exiting force main with two 8" HDPE force mains, and package C in partnership with Eco Trails (Eagle County) to connect the bike trails from the lift station to the West Vail Interceptor crossing. Gould completed paving and striping on Highway 6/24 for the gravity sewer line work that was completed this year. Gould and their subcontractor finished shoring installation for the new wet well. The wet well base slab was placed October 13. The Contractor is working on forms and rebar for the wet well walls.

Setting forms for the wet well walls



Gould placing concrete for the wet well slab on grade

Site restoration progress looking northwest

Site restoration progress looking southwest

Avon Lab Improvements Melissa Marts

General Project Scope: A new inductively coupled plasma mass spectrometer (ICP-MS) purchased by the District will be installed in the lab. This will provide improved analytical capability to our internal and external customers. This device enables District staff to perform in-house metals analyses that are normally outsourced. Lab and architectural modifications will be constructed, including a new gas cabinet, duct chase, and fume hood. During design, the makeup air unit (MAU) serving the lab was identified to be at the end of its useful life; the HVAC system for the lab and lab offices will also be replaced.

Project Update: A design review application for a minor exterior modification to the Admin building has been submitted to the Town of Avon for staff approval.

Vail Wastewater Treatment Facility (VWWTF) Master Plan Improvements Mark Mantua/Melissa Marts

General Project Scope: A condition assessment of the Vail WWTF conducted as part of the 2017 Master Plan identified various upgrades required to keep the facility in reliable and operable condition. The scope includes a new, larger diesel generator and associated electrical, structural repairs in the aeration basin, equalization, and clarifier rooms, replacement of the aging ultraviolet (UV) system, and construction and installation of an external facility bypass.

Project Update: PCL has broken ground and is occupying the lower parking lot of at Vail WWTF preparing to form and pour the generator pad and install the electrical duct bank. The 90% design submittal for phase II was delivered and is being reviewed by the District and PCL. PCL will develop the phase II cost proposal to be submitted to the District. CDPHE issued the In-Kind Replacement Acknowledgement on October 11, allowing for the District and PCL to proceed with procurement of long lead items including diffusers and UV equipment.

GENERAL CAPITAL

Fleet Maintenance Facility Mark Mantua

General Project Scope: The 2020 Overall Facilities Master Plan indicated an opportunity to relocate the fleet maintenance facility, along with large vehicle and equipment storage and water meter testing and storage, to the property known as “Hillcrest’ at the corner of Hillcrest Drive and U.S. Highway 6. We are moving forward with that concept but located on a parcel of land immediately east of the Edwards Wastewater Treatment Facility on Lake Creek Village Drive.

Project Update: The project architectural consultant, D2C, has begun the data collection phase of the project. D2C is currently reviewing existing survey and engineering reports conducted on the existing property. To better understand the District's needs at the new facility, D2C facilitated site visits, interviews and questionnaires. Three local fleet facilities were toured by multiple District and D2C members. Two separate meetings were conducted and a written questionnaire about fleet needs was completed by District staff. After data collection is complete in early Nov., D2C will

begin developing preliminary site concepts. Preliminary site concepts are expected from D2C in early Dec.

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

M E M O R A N D U M

TO: District and Authority Boards of Directors

FROM: Jason Cowles, P.E.

DATE: October 19, 2022

RE: Engineering & Water Resources Report

Authority Unallocated Water Update

The Authority's unallocated water projection remains at 227.31 acre feet. This includes 51.19 acre feet of unrestricted Eagle Park Reservoir water, which includes the 25 acre feet pledged to the Authority by the District. It also includes 78.13 acre feet of Eagle Park Reservoir water committed to workforce housing, and 97.98 historic irrigation season consumptive use credits.

It should be noted that the Authority has very few Brett Ditch HCU credits available in August and September and must use in-basin storage releases to augment depletions for cash in lieu of water rights customers in August in September per the Authority's decreed global augmentation plan. Thus, the limiting factor for the Authority's ability to serve new developments will be the 51.19 acre feet of remaining unrestricted Eagle Park Reservoir water. We will discuss the impact this will have on the water dedication policy in the work session planned for the Board meeting.

Bolts Lake

Field investigations for the preliminary design of Bolts Lake reservoir are underway. LRE Water obtained work plan approval from CDPHE and EPA for the installation of soil moisture probes and data loggers in the Old Tailings Pile (OTP) area and completed the installation of the equipment the week of October 10. Data collected from this effort will further calibrate our groundwater model and improve our understanding of groundwater recharge rates in the area following the planned reclamation of the OTP.

Authentic Drilling also mobilized their core rig to the site the week of October 10 and completed the first borehole in bedrock on the south abutment of the main dam alignment. Bedrock cores taken from the borehole will be used to evaluate bedrock properties for dam foundation design. A piezometer was also installed to the monitor level and flow patterns of groundwater in the subsurface for design purposes. Authentic mobilized their sonic drill rig to the site this week in an effort to complete all six planned boreholes by the first week of November before winter conditions set in.

Finally, a grading permit application had been submitted to Eagle County for the excavation of several exploratory test pits at the District's 25-acre Biosolids Containment Facility property adjacent to the Eagle County landfill. The test pits will be used to evaluate the quality and quantity of clay material on the site to determine if it will be a suitable borrow source for clay material for the reservoir's dam core and liner.

Homestake Creek Transit Loss Study Update

LRE Water has prepared and submitted a revised study and response memorandum to the Division Engineer in response to comments we received on the initial submittal. We will update the boards on the Division Engineer's response once it is received.

Update on Water Budget Program Development

The primary goals of implementing a water budget program are to improve water use efficiency and reduce water consumption. In real numbers, the water savings goal for the District and Authority is to save between 300 and 500 acre feet of augmentation water per year across the entire service area. With our limited water supply at the headwaters of the Eagle River coupled with increasing pressure to reduce water use in the Upper Colorado River Basin, the need for reducing water use is stronger than ever. The District and Authority already have implemented a tiered rate structure to help incentivize efficiency, but this can be improved further by establishing volumetric limits customized for each customer. Direction to pursue implementing a water budget program was provided by the Water Supply Planning Subcommittee at the recommendation of staff in late 2019 before the start of the pandemic. Since that time, staff has been working on various elements of a water budget program. The main elements to implementation include:

- Defining the water budget
- Designing and testing the billing system
- Determining water budget rates
- Obtaining approval from board
- Soliciting public input
- Communicating with customers
- Billing according to water budget volumes
- Maintaining and adjusting program as needed

The primary focus of staff has been on defining a water budget for the various communities within the service area and determining the basis for establishing water budget volumes for each customer class. Indoor water use is less variable than outdoor water use and can usually be set at a fixed volume or established based on average monthly consumption during winter months for each account. This becomes the indoor water budget and is billed at the lowest volumetric rate.

Outdoor usage on landscaping is where the majority of water efficiency can be improved, and residential accounts comprise the majority of the customer base (89%) and total water usage (55%). Outdoor water usage for residential customers is assumed to be about half of this usage.

Another component to residential landscaping is determining the allowable irrigated area based on land use restrictions and/or water right assumptions for irrigated use by community and reconciling that with what is being irrigated in the field. Staff has researched and compiled this information for each development in the Authority, which will be utilized to set budgets in areas that have such restrictions or assumptions. As an example, Cordillera is only allowed 5,000 square feet (SF) of irrigated area per single-family lot per the Planned Unit Development (PUD), but many lots have greater than 5,000 SF of irrigated area.

The next largest outdoor water usage occurs with irrigation only accounts (e.g., HOA irrigated turf). To determine an outdoor water budget volume, utilities typically calculate the outdoor water budget for a given month based on irrigated area with an assumed plant material (e.g., Kentucky bluegrass) multiplied by the evapotranspiration (ET) rate. This yields the plant water requirement and is converted to thousands of gallons allowed within a billing period (i.e., outdoor water budget). This volume varies each month within the growing season and is billed at the next tier rate. Customers should be able to stay within this billing rate when applying irrigation water efficiently and at the proper rate. Water applied more than the budgeted amount during the irrigation season would be billed at the third tier.

Typically, the third tier rate is capped at a fixed volume (e.g., 30,000 gal/month for residential customers) and anything used above that would be considered excessive and a surcharge would apply. This helps discourage excessive water use. Revenue associated with excessive water use often is used to help fund rebate programs for water-saving efforts such as turf replacement or smart irrigation controllers.

Progress has been made on defining the water budget and, with support from the GIS team during 2022, irrigated areas have been delineated based on aerial imagery collected in 2021 and 2022 for all residential (RES) accounts (8,863) as well as irrigation (IRR) only accounts (160). These accounts comprise 91% of the customer base and account for approximately 60% of the total water use within the service area. For the District and Authority's service areas, the ET rate varies based on elevation and aspect. Analysis currently is being performed by the District's water resources consultant (LRE Water) to determine irrigation water requirements for the Eagle Valley by water right service area. This comprehensive analysis will consider variations in elevation and aspect for each water right service area to support more robust and defensible ET rates. This analysis should be completed by mid-November 2022.

Using the irrigated area information for each customer class coupled with the ET rates, staff will determine outdoor water budgets for each account. Further work is needed to determine outdoor water usage on the remaining customer classes (commercial, mixed use, and sprinkler).

The next major step is to evaluate our billing software and customer information system. Staff currently is looking at existing system capabilities to determine if customizing water budgets for each customer each month is feasible. If not, then research will need to be done to determine what billing software is available and at what cost. Concurrent with this work, water budget rates will be evaluated based on financial models built using output from the water budgets defined for all the accounts.

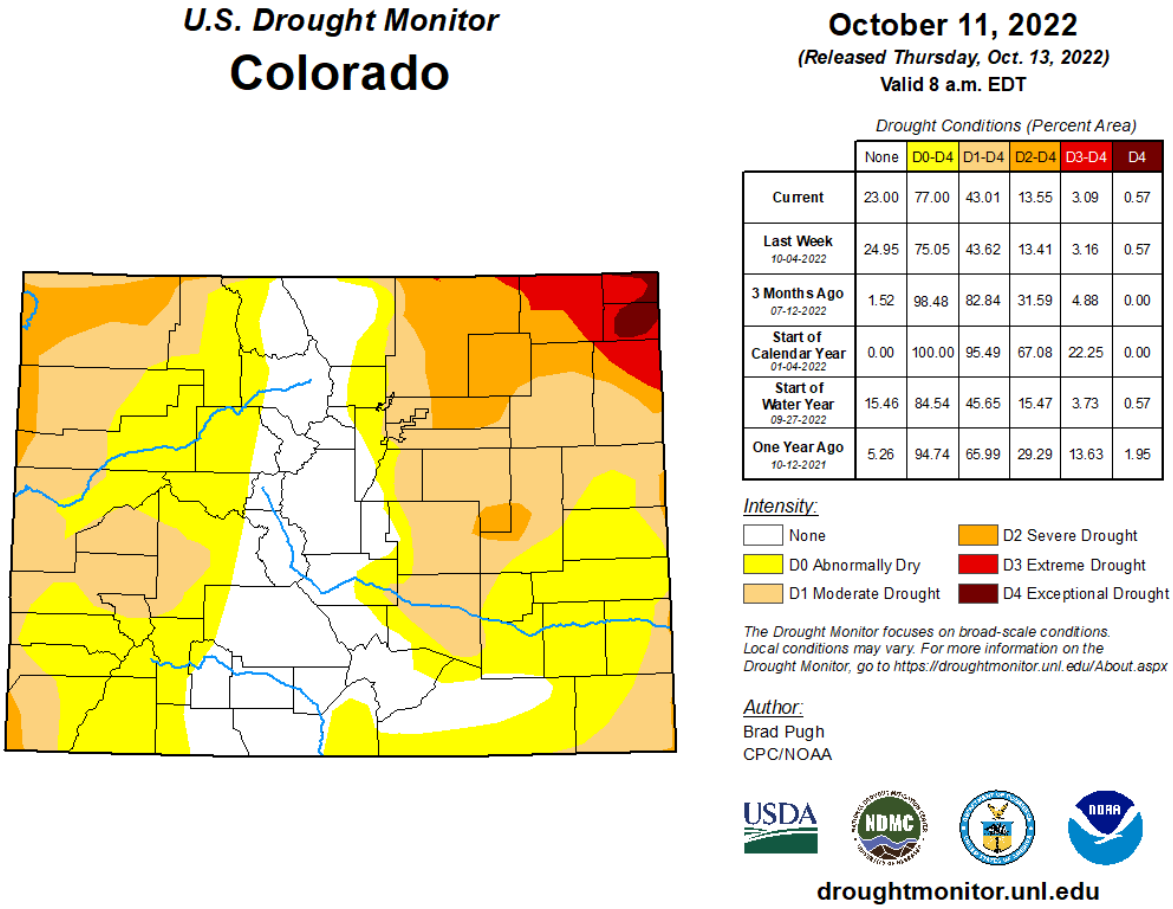
Engaging the community probably is the single most important aspect for successfully implementing a water budget program. Initial messaging from the Board (Valley Voices) and General Manager (e-mail to customers) was the beginning of customer engagement and more is planned for 2023. A comprehensive communication plan will be developed that will include public meetings with community stakeholders throughout the service area, individual contact through emails/mailings as well as telephone calls to customers as needed. Lastly, before implementing actual water budget billing, mock bills with water budget information will be generated and provided to each customer for a 12-month period prior to going live with water budget-based billing. This has been used effectively by other utilities resulting in better understanding on the customer side and very few inquiries or complaints. Clear communication is key to success.

We plan to further discuss our progress with the Boards and present a more detailed schedule and plan for implementation early in the new year. In addition, further analysis of customer accounts is needed to subdivide the residential customer class to distinguish between hotel/lodging, apartments, condominiums, etc. and breakout indoor water use compared to outdoor water use for all customer classes. We also should be able to evaluate our existing billing software and customer information system by the end of 2022 and determine if it is feasible for preparing customized water budgets for each account.

Water Resources Update

The latest U.S. Drought Monitor map for Colorado is shown below in Figure 1. Drought conditions continue to show improvement in the higher elevation regions of the state. Portions of eastern Eagle County and nearly all of Summit County have been removed from drought status in the past month.

Figure 1: US Drought Monitor, Colorado October 11, 2022 (National Drought Mitigation Center).



Unfortunately, the relief from drought conditions may be short lived, as the NOAA Climate Prediction Center's seasonal drought outlook in Figure 2 indicates a likelihood that drought conditions are likely to develop and/or persist throughout the state in December. The Climate Prediction Center's seasonal outlook for temperature and precipitation indicates a high probability that Colorado will see above average temperatures (Figure 3) and below normal precipitation (Figure 4) through December. The seasonal outlook is also consistent with the latest El Niño-Southern Oscillation (ENSO) forecast which favors a 75% chance of La Niña persisting from December through February.

Figure 2: US Seasonal Drought Outlook through December 31, 2022 (NOAA Climate Prediction Center).

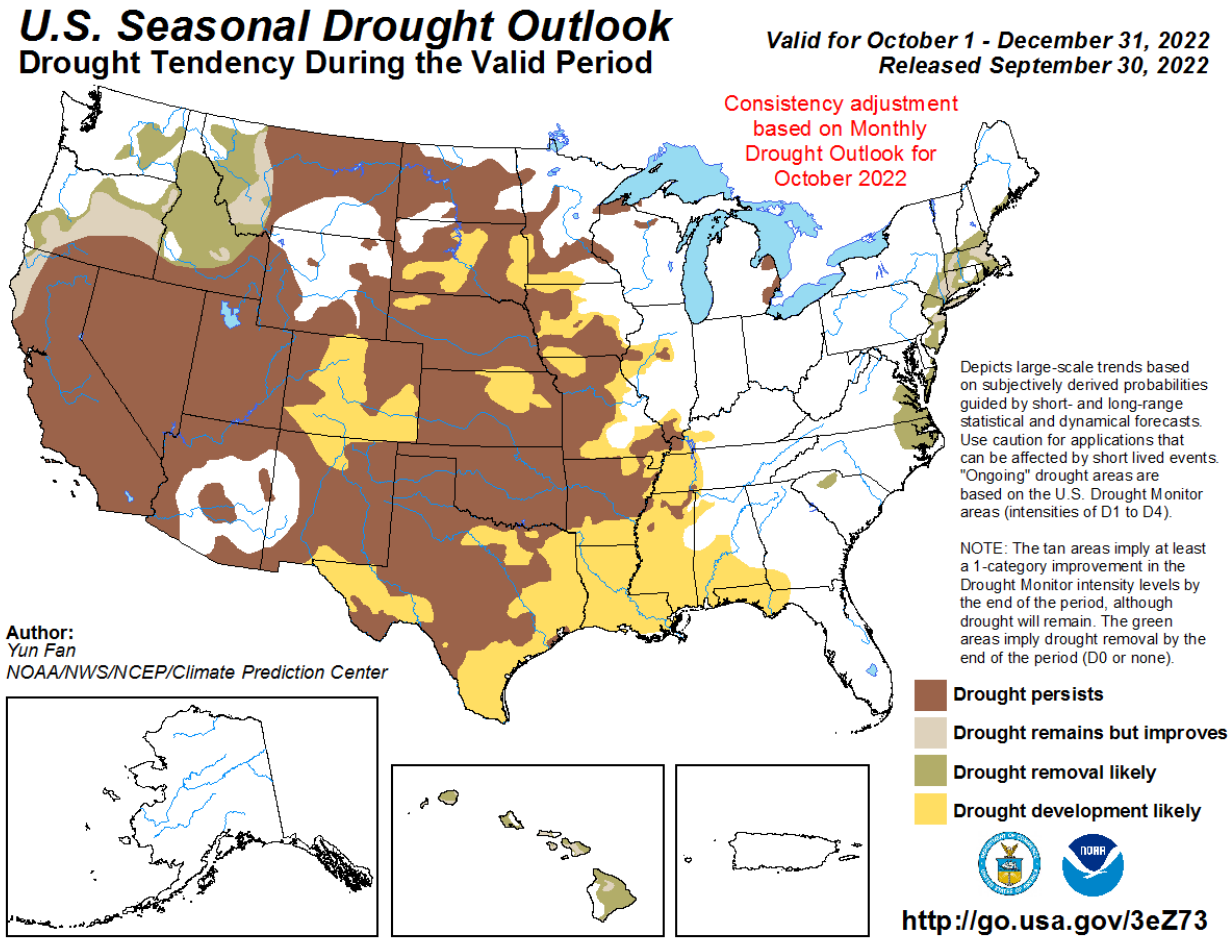


Figure 3: Seasonal Temperature Outlook September 15, 2022 (NOAA Climate Prediction Center).

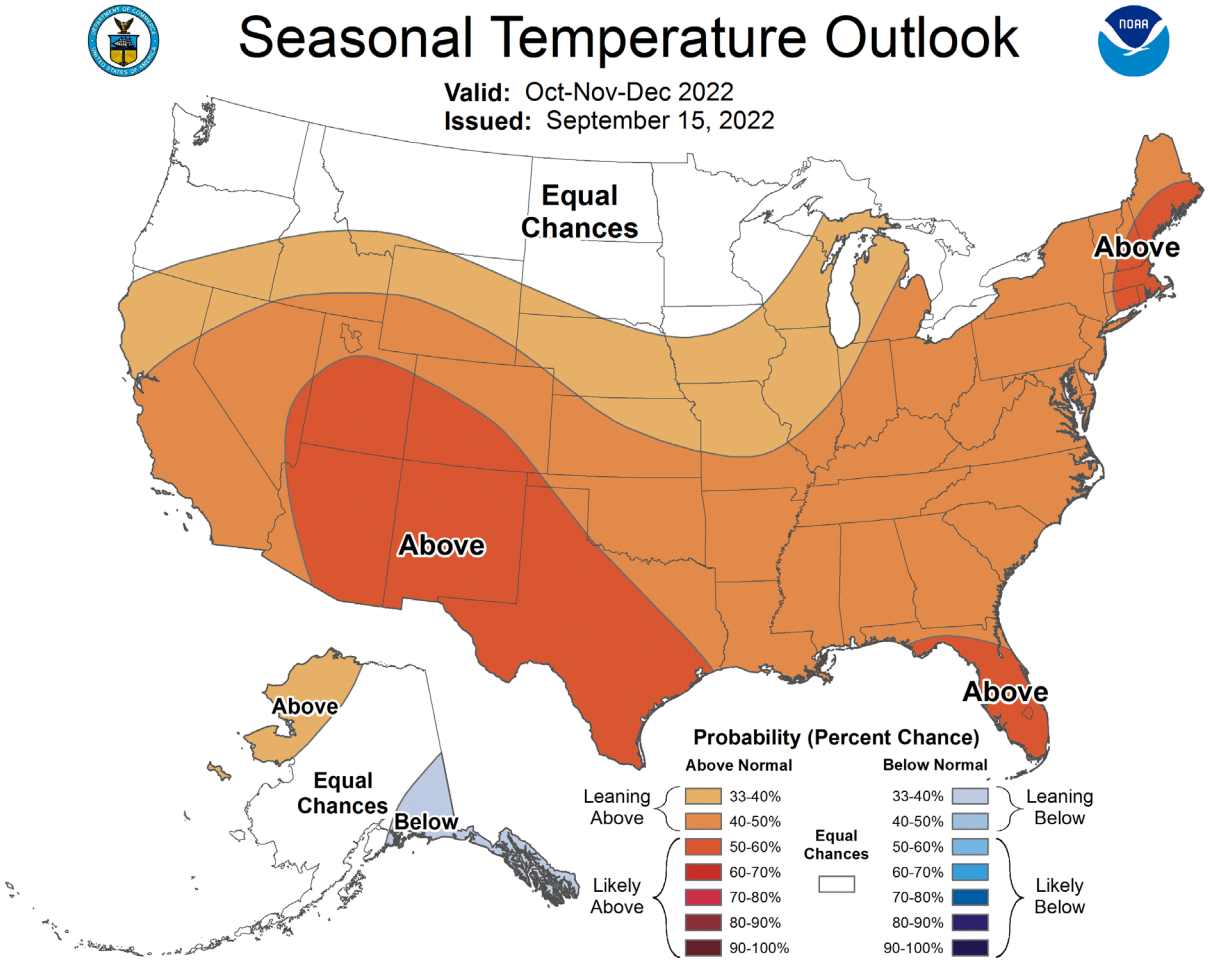
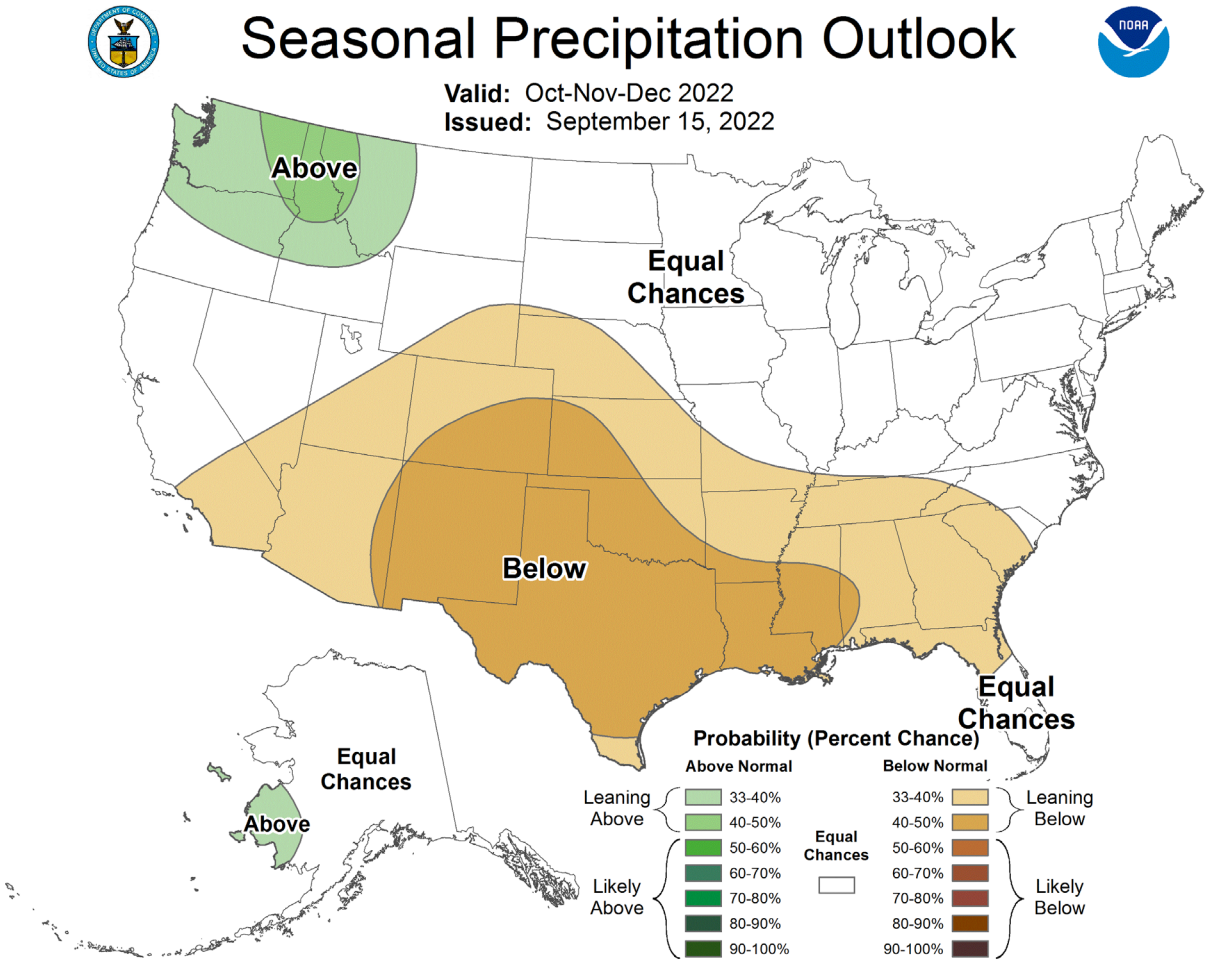


Figure 4: Seasonal Precipitation Outlook September 15, 2022 (NOAA Climate Prediction Center).



Cumulative precipitation at the Vail Mountain Snotel site shown by the purple line in Figure 5 finished the 2021-2022 water year at 28.3 inches, which was 6.3 inches below the median year end value of 34.6 inches, or 82% of normal. Cumulative precipitation at Freemont Pass shown by the amber line on Figure 6 finished 1.9 inches above the annual median at 31.2 inches. Hopefully, I will be able to report on snow water equivalent readings next month at these two sites.

Figure 5: Cumulative Precipitation, Vail Mountain SNOTEL, October 17, 2022 (USDA).

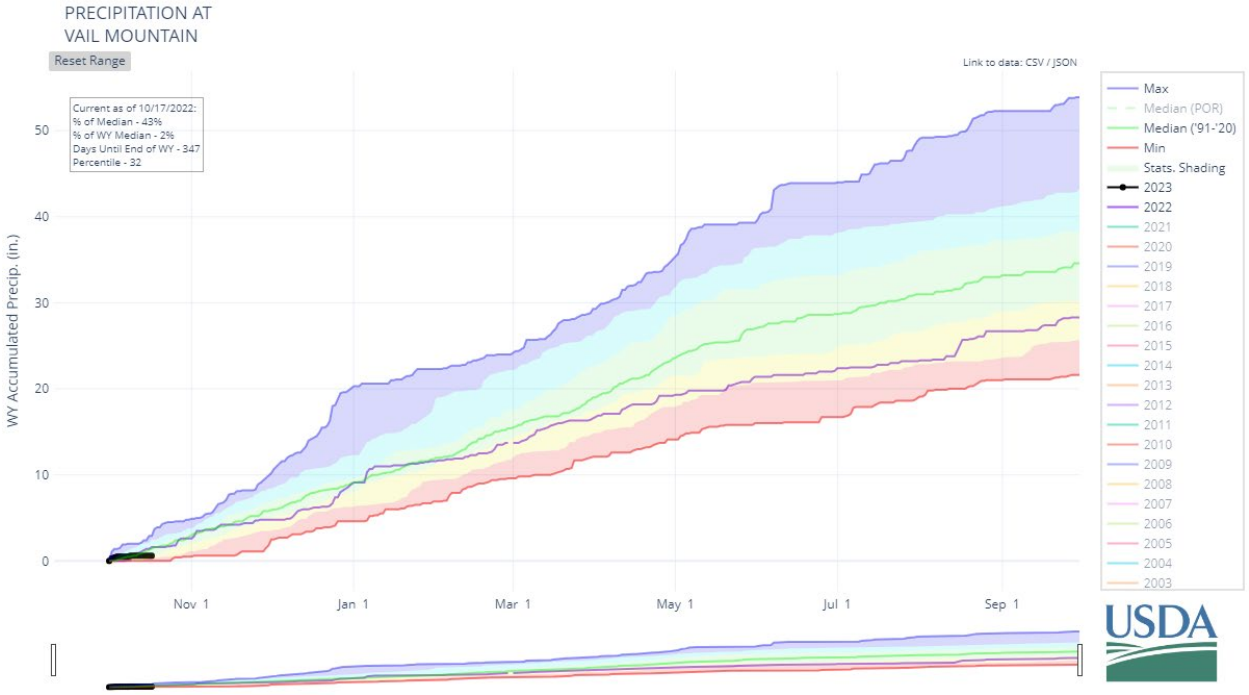
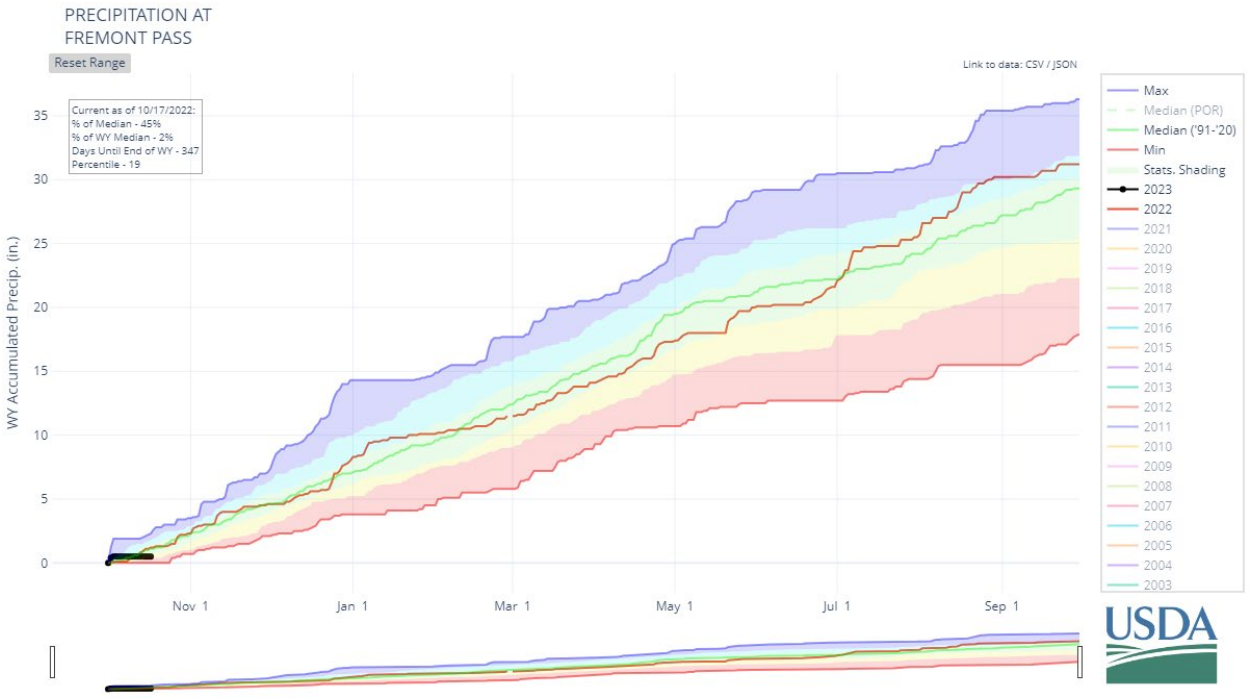


Figure 6: Cumulative Precipitation, Fremont Pass SNOTEL, October 17, 2022 (USDA).



Streamflows on Gore Creek were aided by precipitation in late September and have been trending above the Colorado Water Conservation Board's (CWCB) minimum instream flow of 16 cfs during October but are expected to drop below16 cfs before the end of the week based on the Colorado Basin River Forecast Center's forecast shown in Figure 7. The CWCB minimum instream flow on the Eagle River segment between Gore Creek and Lake Creek dropped from 85 cfs to 35 cfs on October 1 and flows forecast in Figure 8 are expected to trend well above the instream flow.

Figure 7: Streamflow for the USGS station on Gore Creek above Red Sandstone Creek (CBRFC).

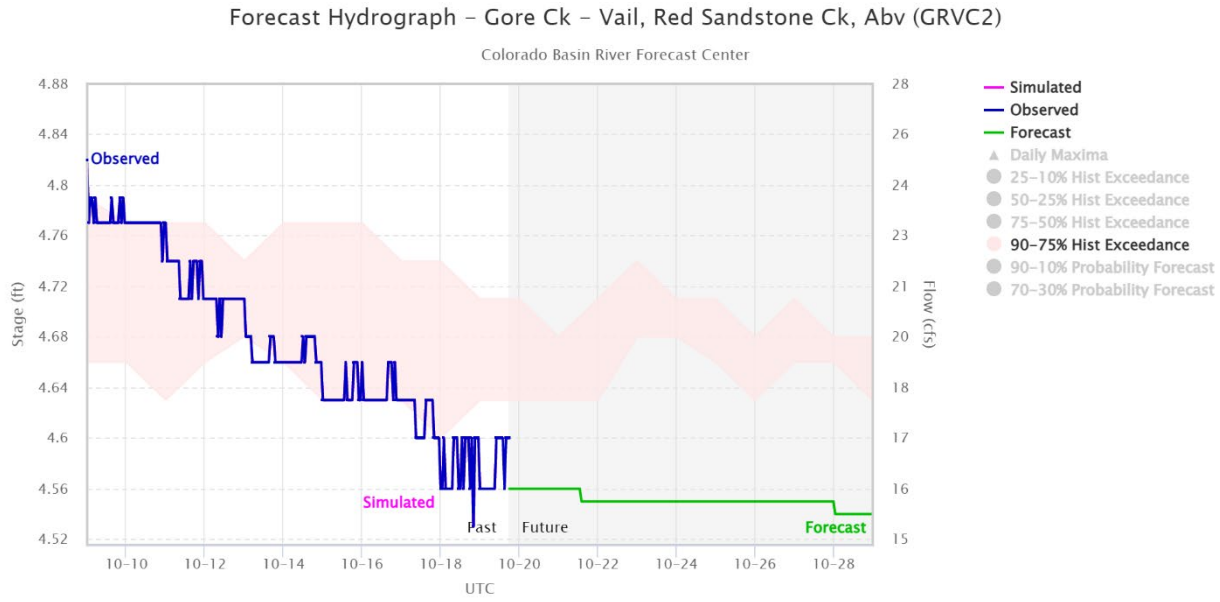
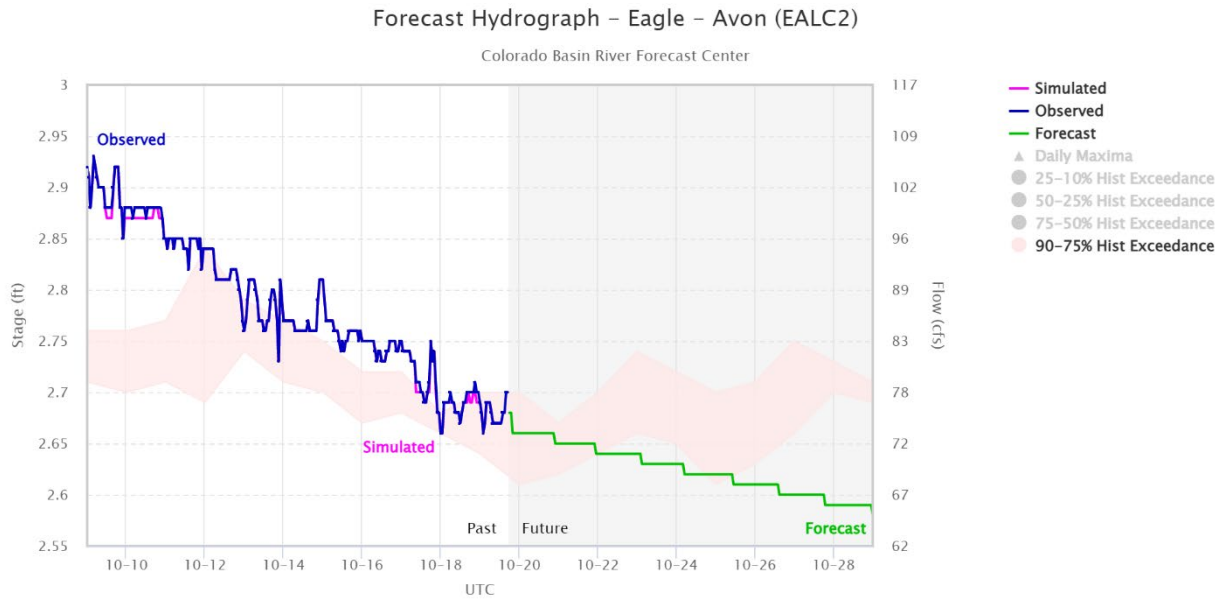


Figure 8: Streamflow for the USGS station on the Eagle River at Avon (CBRFC).



ERWSD and UERWA storage accounts as of October 1, 2022 are shown in Table 1. The Authority's Eagle Park reservoir account sits at 85% full after releasing 93.62 acre-feet during the month of September due to the instream flow call placed on the Eagle River. Green Mountain Reservoir totals reflect September values and will be updated next month when I receive values from Helton and Williamsen.

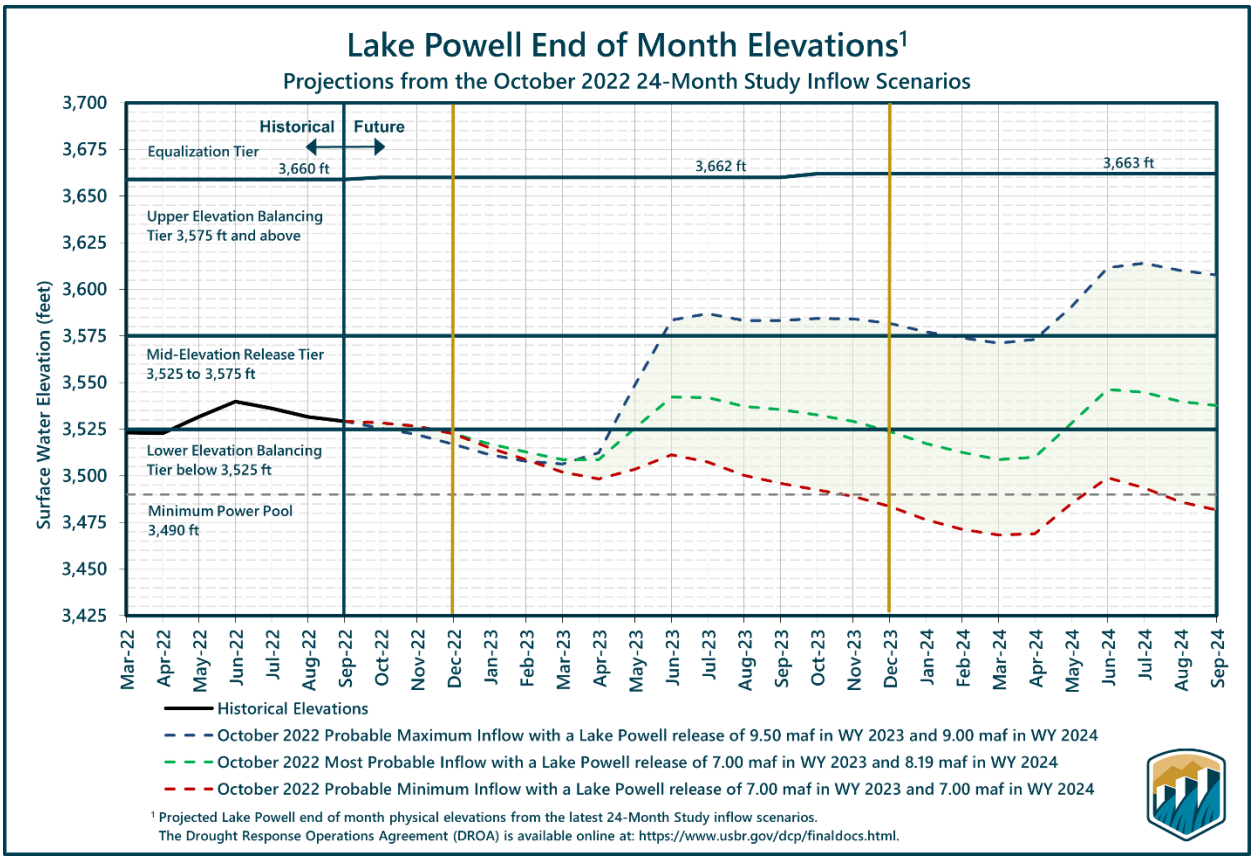
Table 1: ERWSD and UERWA Storage accounts as of October 1, 2022 (Helton and Williamsen).

October 1, 2022 Volumes in Storage and Percentages of Full:

Reservoir	ERWSD		UERWA		Total	
Green Mountain	934.00	100%	518.00	95%	1452.00	98%
Black Lakes	425.00	100%	300.00	100%	425.00	100%
Eagle Park	421.37	99.7%	544.94	85.1%	1113.5	86.8%
Homestake Res	250.00	100%	256.50	100%	506.50	100%
Wolford Mtn	500.00	100%	683.70	96%	1183.70	98%

The Bureau of Reclamations 24-Month Study elevation projections for Lake Powell have been updated for October and are shown below in Figure 9. The projections show that Lake Powell levels are most likely to match current elevations by this time next year based on the most probable inflow scenario. The 24-Month Study will be updated monthly throughout the water year based upon spring runoff forecasts that become more precise as actual snow water equivalent values inform the forecasts.

Figure 9: Lake Powell End of Month Elevation Projections from the October 2022 24-Month Study Inflow Scenarios (Bureau of Reclamation).



Authority Surplus Augmentation Supply

Updated: 3/16/2022 by JEC

	HCUs, acft	In-basin Reservoir Storage, acft	In-basin Reservoir Storage, acft	Out-of-basin Reservoir Storage, acft	Total HCU & In-Basin Storage, acft
	Summer only	Affordable Housing Reserve	Unrestricted		
Modeled Augmentation Surplus[1]	105.70	87.40	127.30		320.40
Projects with Ability to Serve Letters					
Club Residences at CVC	0.04		1.04	0.03	1.08
Current Augmentation Surplus[2]	**105.66**	**87.40**	**126.26**		**319.32**
Augmentation Projections for Projects in Land Use Entitlement Process					
Edwards River Park PUD	5.52	9.27	53.54	1.89	68.32
Mountain Hive	1.27		13.56	0.39	14.83
NorthStar PUD Amendment	0.45		3.16	0.09	3.61
Warner Building Dormitories	0.02		0.02	0.01	0.04
Riverwalk PUD Guide Amendment	0.07		1.67	0.05	1.74
Brown PUD	0.35		3.12	0.09	3.47
Total Pending Augmentation	**7.68**	**9.27**	**75.06**	**2.52**	**92.01**
Projected Augmentation Surplus	**97.98**	**78.13**	**51.19**		**227.31**

Notes:

1) Modeled Augmentation Surplus based on June 25, 2020 unallocated model runs adjusted for Edwards River Park changes.

2) Current Augmentation Suplus Projection considers all projects with Ability to Serve Letters to be allocated.

3) Projects in Land Use Entitlement Proces have Conditional Capacity to Serve Letters but have not yet received land use approvals or completed the Authority's water rights dedication process.

3) Affordable Housing Reserve In-basin Reservoir Storage is Eagle Park water transferred to UERWA by Eagle County and can only be used for affordable/workforce housing projects.

4) Unrestricted In-basin Reservoir Storage includes 25 acft pledged by ERWSD.

5) Out-of-basin Reservoir Storage supplies include 711 acft Wolford Mtn. Res. Contracts and 475 acft Green Mtn. Res. Contracts.

6) The Authority's existing commitment of 34.3 acft of augmentation for the West End PUD is included in the modeled augmentation suruplus.

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

MEMORANDUM

TO: Boards of Directors

FROM: Diane Johnson, Communications & Public Affairs Manager

DATE: October 27, 2022

RE: Communications and Public Affairs Report

Colorado Water Plan
The Colorado Water Conservation Board's 90-day public comment period for the updated Colorado Water Plan ended Sept. 30. The District and Authority submitted written comments, as did more than 1,300 other individuals and agencies. The CWCB team is now in the process of reviewing submitted comments and the final Water Plan is set to be released in January 2023.

Eagle River Water Festival
Sarah Crawford coordinated district involvement in the Eagle River Watershed Council's Eagle River Water Festival held Sept. 23 at Colorado Mountain College. More than 400 fifth graders from throughout the Eagle River valley attended the festival to learn from all the organizations providing a water-related learning station. Five district staff members provided two different activities at the festival.

Safe Drug Disposal Program – National Drug Take Back Day is Oct. 29
The U.S. Drug Enforcement Administration's 23rd "National Take Back Initiative" is set for 10 a.m. to 2 p.m. Saturday, Oct. 29, when local law enforcement personnel will host collection sites at Vail Municipal Building, Walmart in Avon, and City Market in Eagle for disposal of prescription and over-the-counter medications and supplements, including controlled substances. Local agencies accept expired, unwanted, or unused pharmaceuticals that are then disposed of via an environmentally friendly incineration process. The event is free of charge and no personal information is collected.

The District actively coordinates local efforts as part of the existing Safe Drug Disposal Program community partnership that involves the Vail Police Department, Eagle County Sheriff's Office, Avon Police Department, Eagle River Water & Sanitation District, Eagle County, and Vail Health. The District's involvement helps to protects water sources by keeping drugs out of wastewater and the landfill.

If you are unable to make it to the DEA Take Back Event, there are six permanent medication take back receptacles in the Eagle River valley hosted by the Vail Police Department, Avon Police Department, Eagle County Sheriff's Office, Vail Health (2), and Vail Valley Pharmacy.

These drop boxes can accept both controlled substances (narcotics) – such as oxycodone, codeine, phenobarbital, valium and others – and non-controlled medications during regular business hours. The year-round disposal service is free, and items may be deposited anonymously with no questions asked.

For more information, visit www.takemedsback.org.

Attachments (or hyperlinks):
1. Oct. 19 Colorado Sun: How two big Denver suburbs are approaching the reality that they're running out of water
2. Oct. 14 Aspen Journalism: Recreation groups ask for more inclusion in state Water Plan

3. Oct. 12 Fresh Water News: Colorado OKs drinking treated wastewater; now to convince the public it's a good idea
4. Oct. 5 Colorado Sun: Gross Dam opposition gets new legal life in fight against massive Boulder County reservoir expansion
5. Sept. 30 KUNC: Federal officials set their sights on Lower Colorado River evaporation to speed up conservation

The Colorado Sun

ENVIRONMENT

How two big Denver suburbs are approaching the reality that they're running out of water

Fast-growing Castle Rock starts with a turf ban, while Arvada doubles connection fees. Water prices are now part of the affordable housing equation.

Michael Booth

4:08 AM MDT on Oct 19, 2022

New homes are seen under construction near the Montaine community on Oct. 17, 2022, in Castle Rock. (Olivia Sun, The Colorado Sun via Report for America)

Growth is good. But hold the sod. And have the checkbook handy.

Colorado's population growth and the swelling stress on state water resources amid climate change and drought are sending Front Range suburbs in a scramble to shore up sustainable supplies.

Castle Rock is banning traditional grass turf in front yards of new homes and offering developers steep fee discounts for water-saving

"Coloradoscaping" yards. The Douglas County town that is a center for housing sprawl in Colorado foresees dwindling aquifer resources and ever-higher prices to secure new surface water from the state's overtaxed mountain river basins.

Arvada, on the opposite corner of the Denver metro area to the northwest, is more than doubling homebuilders' water and sewer connection fees and sharply raising existing homeowners' utility rates. The city has so far avoided turf bans or other strong conservation measures on development, while a debate builds on whether the its new $54,000 connection fees are making homes even less affordable.

The two cities' big moves, **combined with Aurora's recent decision to restrict new lawns and ban new golf courses**, reflect the strains on high-growth Colorado cities confronted by higher water prices and dwindling supply, older collection and treatment systems hitting capacity, and everyday inflation. Arvada says it is paying 30% more for water treatment chemicals, and triple for piping, amid worldwide price increases.

New homes are seen under construction near the Montaine community Oct. 17, 2022, in Castle Rock. (Olivia Sun, The Colorado Sun via Report for America)

"Water is a critical resource here," Castle Rock Water Director Mark Marlowe said. "These are the things we can do to make that resource go further."

"We are at capacity, and parts of our system are full in places that we expect that growth is going to pay for itself," said Sharon Israel, Arvada's director of utilities.

Aurora sent water messages loud and clear over the summer by moving to ban new golf courses and sharply limit the amount of traditional thirsty lawn grass installed in the yards of new homes.

Now comes fast-growing Castle Rock, which Tuesday night was expected to give final passage to a ban on front yard grass in new homes and a limit on backyard grass to 500 square feet. The new rules also demand that developers oversee all water-wise landscaping if they want to qualify for discounts off steep tap fees.

City water agencies are ramping up those tap fees charged to developers to link to local water systems to pay for higher water acquisition and distribution costs amid the historic Western drought. The tap fees have risen so high that homebuilders are arguing — out of self-interest, but also reflecting concerns of town officials — that water fees are a major contributor to the lack of affordable housing on the Front Range.

Castle Rock's utility system fees for a newly built single-family home in 2023 will be $42,097, up from $37,067 this year. Developers who agree to oversee landscape installation themselves using certified conservation contractors can trim more than $16,000 from that total under the new rules, officials said.

Arvada's vote Monday night boosted charges for water, sewer and stormwater connections that it calls "system development fees" to $54,000, more than double the previous $25,000 fee, according to city officials and the Home Builders Association of Metro Denver.

Builders know water conservation is crucial now more than ever, and agree with the gist of the Aurora and Castle Rock initiatives, HBA's Morgan Cullen said. They did seek concessions, not wanting to be responsible for overseeing all the landscaping.

But the rapid increase in new home tap fees, in Arvada and to a lesser extent in places like Castle Rock, is exacerbating crushing affordability problems for new buyers, Cullen said. "Water is getting prohibitively expensive," he said. At current median home prices, the rising tap, storm and wastewater fees represent about 10% of the overall price, he noted.

The stress on water resources and homebuyer resources will only worsen. Castle Rock **expects to grow** from 81,000 people to 140,000 in the next couple of decades. The city wants to cut per capita water use by 18% in the next 10 to 20 years, Marlowe said.

Castle Rock gets its drinking water from a combination of withdrawals from aquifers under Douglas County, which are depleting and can't continue to be used at current rates, and buying from Denver and Aurora. Water law allows much of Castle Rock's water to be reused — withdrawals from aquifers and transmountain diversions can be recycled "to depletion." The town is working on recycling more aquifer water back into the system after it is spread on landscapes and flows back to local creeks.

Restricting water use in new development also helps keep costs lower for existing Castle Rock homeowners, Marlowe said, a key consideration as electric, water and other utility rates soar. On a winter day, Castle Rock uses 4 million to 5 million gallons of water, while summer days peak at 19

million gallons. The city must build out enough infrastructure to handle the peaks, and charge ratepayers for the capacity and upkeep.

Tennis courts and amenities surround Montaine, a resort-style neighborhood of luxury homes, in Castle Rock. Turf restrictions were not in effect when these portions of Montaine were built, but landscape designs use water-saving plants and limit grass lawns. (Olivia Sun, The Colorado Sun via Report for America)

Avoiding new infrastructure through keeping the summer peaks lower "will help on rates" over the long term, Marlowe said.

Castle Rock calls its alternative home landscaping models "Coloradoscaping," and Marlowe said such water-saving designs will be part of many new developments up and down the Front Range. "We certainly think it's a good thing for the state as a whole," he said.

Arvada's steep increases to both development fees and rates for existing water and sewer users will shore up existing systems and allow growth that supports future city budgets, **council members said in approving the increases unanimously Monday night**.

"Development has to pay its own way," Arvada Mayor and Councilmember Marc Williams said. "We're not going to do it on the backs of existing ratepayers. Yes, we recognize this is going to have an impact on housing costs." Like other council members, Williams said Arvada now needs to redouble efforts on both utility support programs for lower-income customers, and creating more affordable housing units.

"We invite all of you to work with us on that," Councilmember Lauren Simpson told developers and community members in the audience.

"As much as I hate to do it, it's a necessary evil. I hope this doesn't deter development in our community," Councilmember David Jones said.

Developers speaking at Monday night's public hearing said the connection fees were high, but praised the council for agreeing to delay higher payments until July 2023 to allow them to line up permits and financing before the new fees take effect.

"I hope that with the modification, developers will still see Arvada as a great place to be," Jones said.

Arvada purchases most of its water from Denver Water. The Jefferson County community is paying for one-sixth of the controversial expansion of Denver Water's Gross Reservoir Dam in Boulder County, and will receive one-sixth of the new water supply from that, Israel said.

The city and consultants spent the past three years studying water supply and capacity for water treatment, stormwater and sewage, Israel said. Council members mentioned their tours of the aging sewage treatment facilities reaching their limits, and having helped neighbors shovel sewage out of basements after the 2013 floods on the northern Front Range.

Denver Water, meanwhile, is raising its raw water charges to Arvada by 15%, Israel said. Every stage of utility handling is undergoing massive inflation, from water cleaning chemicals to pipelines to fuel and equipment. Arvada needs to issue $100 million in bonds for its water and sewage utility systems, and interest rates on that new borrowing will be far higher than the rates contemplated three years ago.

At the same time the new development fees were passed, the council approved a 12.3% increase in existing water rates and a 9.8% boost to sewage rates. Both systems will also charge higher fixed monthly service fees.

"So all of that together we estimate it would be about $9 more a month for a typical single-family residence," Israel said. "We are still in the bottom third of the metro area in terms of fees for water and sewer services. So it sounds like a big jump, but it's a big jump on a relatively smaller number."

READ MORE

PHOTOS: It's rutting season at Rocky Mountain National Park, so here's some fun elk facts
4:04 AM MDT on Oct 21, 2022

Castle Pines addresses sewage spills after negotiations with Parker Water failed
4:15 AM MDT on Oct 20, 2022

50,000 southeast Colorado residents will finally get clean drinking water thanks to federal infrastructure funding
4:00 AM MDT on Oct 19, 2022

Israel acknowledged Arvada has not made the same push that Castle Rock and Aurora have made to reduce thirsty grass lawns. Landscape watering typically makes up about 50% of municipal water use in arid states that are thick with traditional turf grass. Arvada customers have access to consultation on creating a more water-wise landscape, she said, and the city is gradually installing smart water meters in homes that alert customers to leaks and their overall use.

"We haven't gone the same route as some other communities," she said.

Colorado OKs drinking treated wastewater; now to convince the public it's a good idea

by **Jerd Smith** | Oct 12, 2022 | **Conservation and Efficiency**, **Drinking Water**, **Infrastructure**, **Major River Basins**, **Technology**, **Water Supply** |

The Colorado Department of Public Health and Environment. Credit: Jerd Smith

Colorado regulators, after years of study, negotiations and testing, approved a new rule that clears the way for drinking treated wastewater this week, one of only a handful of states in the country to do so.

The action came in a unanimous vote of the Colorado Water Quality Control Commission Oct. 11.

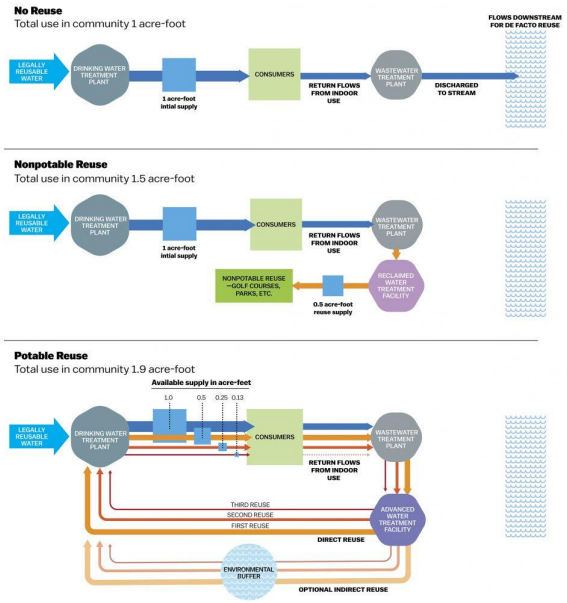
Direct potable reuse (DPR) involves sophisticated filtering and disinfection of sewage water for drinking water purposes, with no environmental buffer, such as a wetland or river, between the wastewater treatment plant and drinking water treatment plant. That water is then sent out through the city's drinking water system.

Colorado joins Ohio, South Carolina and New Mexico in setting up a regulated DPR system, with California, Florida and Arizona working to develop a similar regulatory scheme, according to Laura Belanger, a water reuse specialist and policy advisor at Western Resource Advocates.

Ron Falco, safe drinking water program manager for the Colorado Department of Public Health and Environment (CDPHE), said the new regulation would provide communities across the state important access to a new, safe source of drinking water, a critical factor in a water-short state.

"This is going to be a need in Colorado and we want to be prepared," he said. "Can DPR be done safely? Our answer to that is yes."

Aurora has had a reuse system in place for more than a decade that also uses treated wastewater. But Aurora's water is treated and released from the wastewater treatment plant into the South Platte River, where it flows through the river's alluvial aquifer, before Aurora pumps it out through groundwater wells. Aurora then mixes it with raw mountain water before treating it and distributing it to customers. That practice is known as indirect potable reuse — there's an environmental buffer between the wastewater plant and the drinking water plant, in Aurora's case, that's the river. Indirect potable reuse is used by several big cities nationwide, including San Diego.



Graphic by Chas Chamberlin, Source: Western Resource Advocates

Under Colorado's new regulation, water providers will be required to show they have the technical, managerial and financial resources needed to successfully treat wastewater.

Communities will also be required to show how they will remove contaminants in their watersheds before the water reaches rivers and streams.

Wastewater intended for drinking will require extensive disinfection and filtration, among other techniques, all of which are intended to eliminate pathogens like viruses and bacteria, and remove drugs and chemicals to safe and/or non-detectable levels, according to CDPHE.

And any community that seeks to add treated wastewater to its drinking water system will have to set up extensive public communication programs to show the public its process and to help educate residents about this new water source.

Communities will also have to collect a year's worth of wastewater samples and prove that they can be successfully treated to meet the new standards.

Western Resource Advocates' Belanger, who has long advocated for the use of DPR, said the approval has been a long time coming and is cause for celebration.

"We believe DPR is a very important water supply for our communities now and into the future. We feel [this new regulation] is robust and protective of public health."

But key to tapping the new water source will be helping the public get over the "ick factor," officials said.

Jason Rogers, vice chair of the Water Quality Control Commission who is also Commerce City's director of community development, said public outreach should be carefully monitored to ensure it is actually reaching people in all communities and that it is being well-received.

"When thinking about that public meeting, where does it occur? People in some of these communities may have a high reliance on multi-modal transportation, it may not allow for that meaningful engagement," Rogers said. "And if it isn't being well received, we need to have them go out and do more public engagement."

With a mega drought continuing to grip the Colorado River Basin and other Western regions, Colorado's multi-year process to develop a sturdy new drinking water regulation drew widespread attention, said Tyson Ingels, the head drinking water engineer at the state's Water Quality Control Division.

Ingels said Utah and Arizona participated in Colorado's work sessions, demonstrating the interest in what could become an important new water source in the West. Arizona is just now kicking off its own rulemaking process, Ingels said, and Utah, while not yet regulating DPR, has seen a handful of communities proposing to use DPR.