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: February 16, 2024

RE: February 22, 2024, 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, February 22, 2024
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.

Input from members of the public is welcomed during the meeting's designated Public Comment 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
February 22, 2024
8:30 a.m.
Walter Kirch Conference Room

AGENDA

1.	**Introductions**	**Attachment Link**
2.	**Public Comment**	
3.	**Action Items**	
3.1.	Minutes from Jan. 25, 2024, Regular Meeting	Action Item
3.2.	Water Rights Dedication: Colorado State Land Board Community Housing Project	Action Item
3.3.	2024 Rules and Regulations Revisions	Action Item
4.	**Information Reports**	
4.1.	Board committees	Informational
4.2.	January meeting summary – draft	Confidential
4.3.	Contract log	Informational
5.	**Board Member Input**	
6.	**General Manager Report – Siri Roman**	
6.1.	GM information items	
6.2.	Business Administration report – David Norris	
6.2.1.	Bond update – Jim Cannava	Informational
6.2.2.	Water conservation program update – Allison Ebbets	Informational
6.2.3.	Safety & risk review – Dan Siebert & Michael Rae	
6.3.	Operations report – Brad Zachman	Informational
6.4.	Engineering and Water Resources report – Jason Cowles	Informational
6.4.1.	Bolts Lake update	
6.5.	Communications and Public Affairs report – Diane Johnson	Informational
7.	**Water Counsel Report – Kristin Moseley**	
7.1.	Bolts Ditch Act	Informational
8.	**Water Quality Counsel Report – Steve Bushong**	
8.1.	PFAS class action settlement update	Informational
9.	**General Counsel Report – Kathryn Winn**	
10.	**Executive Session**	
10.1.	Receive legal advice regarding Bolts Lake and Battle North/Minturn Case Nos. 21CW3029 and 21CW3030, pursuant to § 24-6-402(4)(b), C.R.S.	Confidential
11.	**Any Action as a Result of Executive Session**	
12.	**Adjournment**	

Return to agenda

UPPER EAGLE REGIONAL WATER AUTHORITY

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Arrowhead
Beaver Creek
Berry Creek
EagleVail
Edwards

The Town of Avon

BOARD ACTION REQUEST

TO: Authority Board of Directors

FROM: Jason Cowles, P.E. and Micah Schuette, P.E.

DATE: February 22, 2024

RE: CSLB Community Housing Project - Water Rights Dedication

Summary of Subject: Staff is requesting Board approval of a 16.0 acre foot dedication of water rights for service to the development of the Colorado State Land Board (CSLB) parcels near Dowd Junction that are to be annexed into the Town of Avon.

Discussion and Background: This Board Action Request is concerning the water rights dedication for the CSLB parcels located at the east end of the Eagle-Vail commercial area.

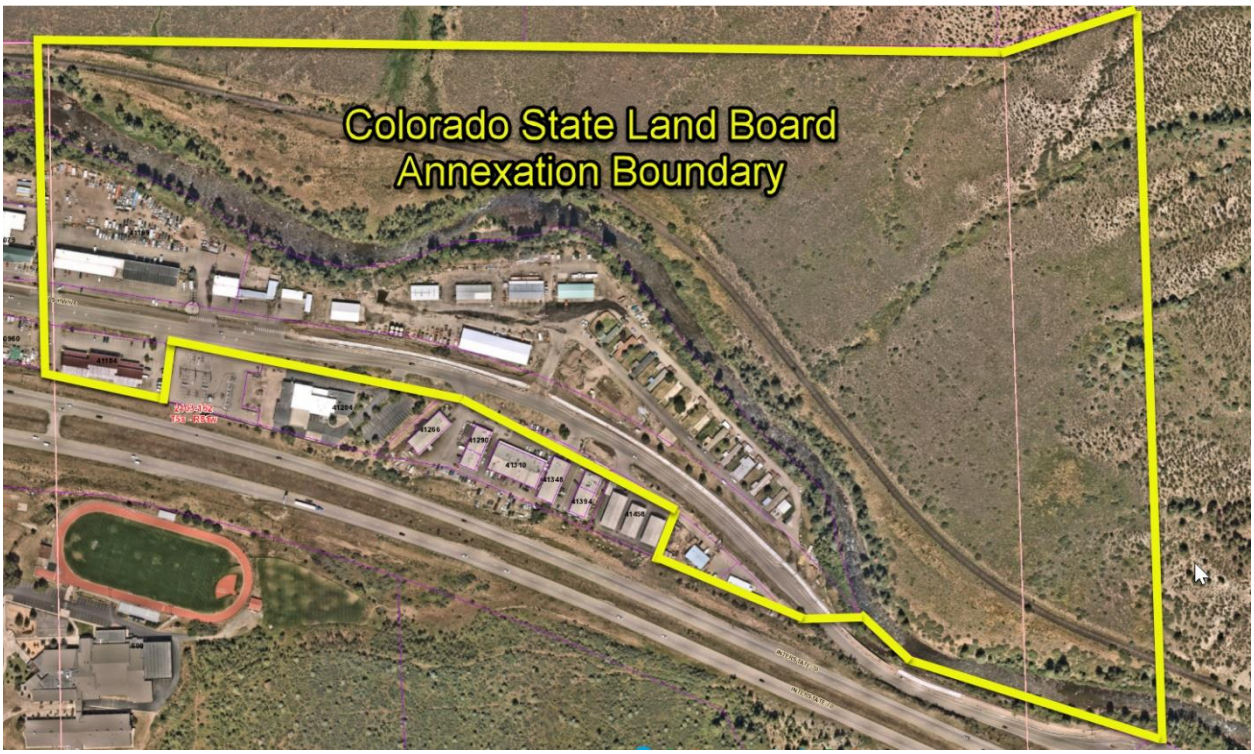


Figure 1. Colorado State Land Board Project Boundary

The proposed community housing project allows for the phased development and redevelopment of several parcels of land owned by the CSLB. The Authority currently serves water to 15 existing mobile home units owned by the Colorado Department of Transportation. The CLSB also leases approximately 60,000 square feet of commercial space on the property that are currently served by private wells. The property is currently proposed for annexation into the Town of Avon. Concurrent with annexation the

property will be zoned with a mix of zone districts including Community Housing High Density, Community Housing Medium Density, Community Housing, Mixed Use, Public Facilities, Parks, and Open Space. A proposed zoning map is attached as Exhibit 1. The proposed zoning will permit the development of up to 700 multifamily, residential units, 60,000 square feet of commercial square footage and approximately 4.8 acres of irrigated land. The Town of Avon and CLSB anticipate that build out of the development will be phased and will occur over the next 25 years due as current leases expire.

Water rights will be dedicated to serve the project pursuant to the 2020 Eagle Park Reservoir Stock Agreement between the Authority and Eagle County, in which Eagle County dedicated 874.3976 shares of stock equivalent to 87.43976 acre feet of yield in Eagle Park Reservoir to support water dedication requirements for affordable, employee or workforce housing projects. A copy of the executed Agreement is attached for reference. District Staff is requesting Board approval of the water rights dedication to serve the increased demand from the redevelopment and will subsequently provide a determination on the amount to Eagle County for its approval in accordance with the terms of the Agreement.

Staff has made the following assumptions in calculating the water rights dedication for the project:

1. Staff is projecting residential water demands for 685 net, new multifamily housing units at the rate of 200 gallons per day per multifamily unit.

2. Staff is projecting commercial indoor water demands for 60,000 square feet of commercial space using a rate of 0.10 gallons per day per square foot.

3. Staff's outdoor irrigation projection includes irrigation to 1.21 acres of turf fields and parks with a projected annual irrigation application rate of 30 inches. The remaining 3.59 acres of irrigated areas are limited to an annual application rate of 12 inches of water per the landscape irrigation design budget contained in the Town of Avon's land development codes. In total, staff is projecting 6.62 acre-feet of demand for the proposed 4.8 acres of irrigated area.

The water dedication requirement for the project is based upon the projected consumptive use. Indoor consumptive use is set at 5% of indoor demands and outdoor consumptive use is set at 80% of outdoor demands. The resulting consumptive use for the project is 13.31 acre feet. Because the project will be developed over time and in phases based on the Town's zone districts which don't include the typical specificity of uses that we've included in recent Planned Unit Developments, we recommend that the 120% dedication factor be applied. This results in a total dedication of 16.0 acre feet, rounded to the nearest tenth of an acre foot.

Following confirmation of the dedication by Eagle County, Staff will work with legal counsel to prepare a water and wastewater service agreement with the CSLB for the project.

Alternatives: A number of other alternative demand calculations could be considered based on input from the Board.

Legal Issues: The water dedication will be subject to approval by Eagle County in accordance with the Eagle Park Reservoir Stock Agreement. A water and wastewater service agreement will still be required to complete the water rights dedication process. Legal Counsel will be present at the Board meeting to discuss any potential legal questions.

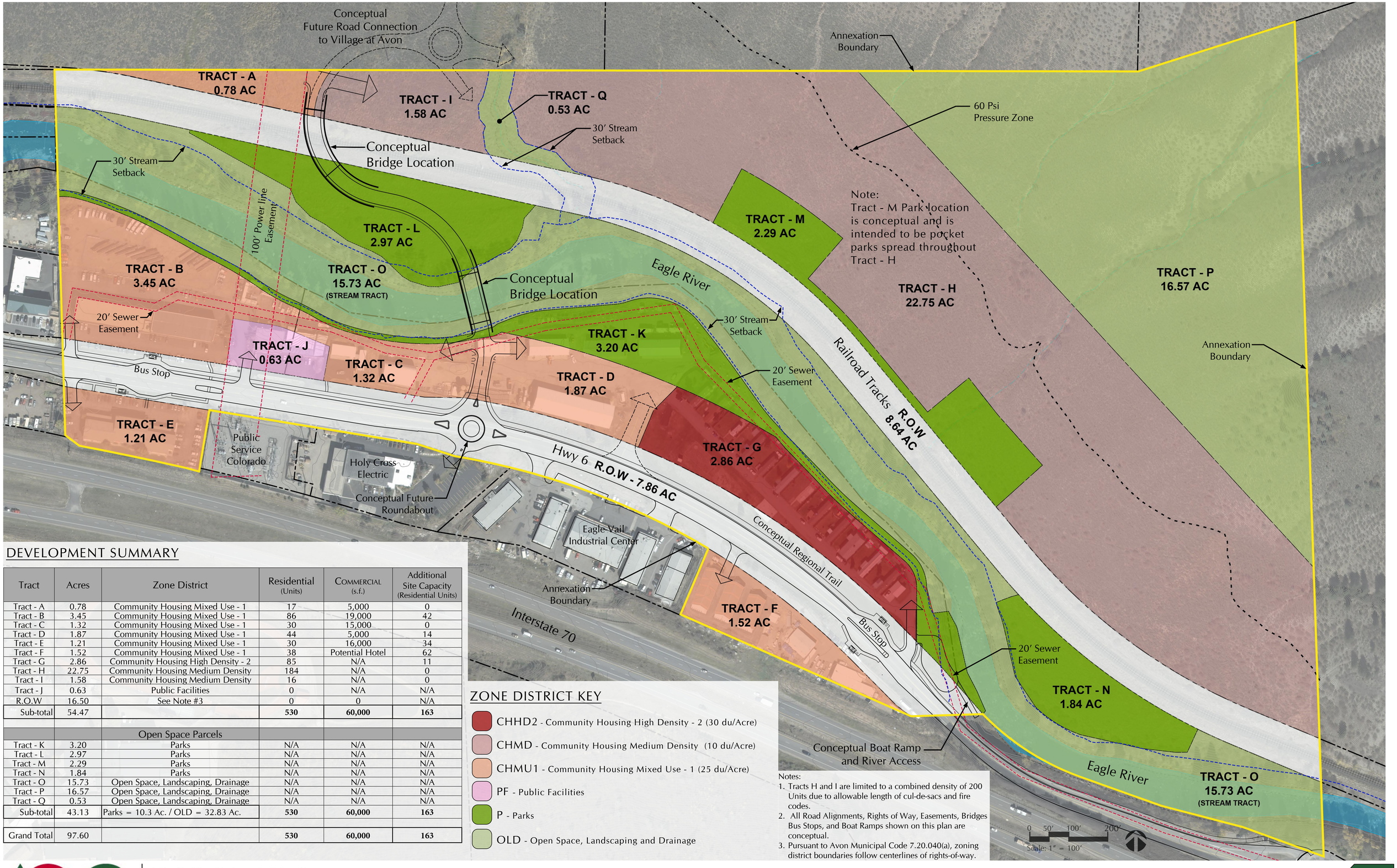
Budget Implication: There are no budget implications associated with this action.

Recommendation: Staff recommends approval of the proposed water rights dedication amount of 16.0 acre feet for the CSLB Community Housing project.

Suggested Resolution and Motion: **I move to accept the dedication of 16.0 acre feet of Eagle Park Reservoir water rights for service to the Colorado State Land Board Community Housing Project, and I instruct staff to execute a Water and Wastewater Service Agreement with the Colorado State Land Board pending approval of the dedication by Eagle County.**

Attached Supporting Documentation:

- **CSLB Dowd Junction Parcels Zoning Plan**
- **Eagle Park Reservoir Stock Agreement**
- **Colorado State Land Board Community Housing Project - Water Demand Worksheet**
- **Colorado State Land Board Community Housing Project - Water Rights Dedication Calculator**



DEVELOPMENT SUMMARY

Tract	Acres	Zone District	Residential (Units)	Commercial (s.f.)	Additional Site Capacity (Residential Units)
Tract - A	0.78	Community Housing Mixed Use - 1	17	5,000	0
Tract - B	3.45	Community Housing Mixed Use - 1	86	19,000	42
Tract - C	1.32	Community Housing Mixed Use - 1	30	15,000	0
Tract - D	1.87	Community Housing Mixed Use - 1	44	5,000	14
Tract - E	1.21	Community Housing Mixed Use - 1	30	16,000	34
Tract - F	1.52	Community Housing Mixed Use - 1	38	Potential Hotel	62
Tract - G	2.86	Community Housing High Density - 2	85	N/A	11
Tract - H	22.75	Community Housing Medium Density	184	N/A	0
Tract - I	1.58	Community Housing Medium Density	16	N/A	0
Tract - J	0.63	Public Facilities	0	N/A	N/A
R.O.W	16.50	See Note #3	0	0	N/A
Sub-total	54.47		**530**	**60,000**	**163**
		Open Space Parcels			
Tract - K	3.20	Parks	N/A	N/A	N/A
Tract - L	2.97	Parks	N/A	N/A	N/A
Tract - M	2.29	Parks	N/A	N/A	N/A
Tract - N	1.84	Parks	N/A	N/A	N/A
Tract - O	15.73	Open Space, Landscaping, Drainage	N/A	N/A	N/A
Tract - P	16.57	Open Space, Landscaping, Drainage	N/A	N/A	N/A
Tract - Q	0.53	Open Space, Landscaping, Drainage	N/A	N/A	N/A
Sub-total	43.13	Parks = 10.3 Ac. / OLD = 32.83 Ac.	**530**	**60,000**	**163**
Grand Total	97.60		**530**	**60,000**	**163**

ZONE DISTRICT KEY

- CHHD2 - Community Housing High Density - 2 (30 du/Acre)
- CHMD - Community Housing Medium Density (10 du/Acre)
- CHMU1 - Community Housing Mixed Use - 1 (25 du/Acre)
- PF - Public Facilities
- P - Parks
- OLD - Open Space, Landscaping and Drainage

Notes:
1. Tracts H and I are limited to a combined density of 200 Units due to allowable length of cul-de-sacs and fire codes.
2. All Road Alignments, Rights of Way, Easements, Bridges Bus Stops, and Boat Ramps shown on this plan are conceptual.
3. Pursuant to Avon Municipal Code 7.20.040(a), zoning district boundaries follow centerlines of rights-of-way.

COLORADO
State Land Board

Dowd Junction Parcels
eagle-vail, co

Exhibit D - Zoning Plan

zehren and associates, inc.
12.14.2023
po box 1976 . avon, colorado 81620. 970 949 0257. www.zehren.com

EAGLE PARK RESERVOIR STOCK AGREEMENT

This Agreement dated this 7/29/2020, is between the Board of County Commissioners of Eagle County, Colorado (the "County") and the Upper Eagle Regional Water Authority (the "Authority").

Recitals

A. The County is the owner of 874.3976 shares of Class A Series 2 stock of the Eagle Park Reservoir Company which entitles the County to 87.43976 acre feet of water from Eagle Park Reservoir (the "Reservoir Company stock").

B. The County acquired the Reservoir Company stock to meet water service obligations of affordable housing developments in Eagle County, water conservation goals in Eagle County, and stream and river health in the Eagle River basin.

C. The Authority is the municipal water provider for the area from Eagle-Vail to Edwards (the "Authority service area") and, with the Eagle River Water & Sanitation District (the "District"), has been a community leader in developing affordable employee housing, conserving water, and developing projects that have enhanced the health of the streams and rivers in Eagle County.

D. The County believes that the best means of supporting the development of affordable housing, water conservation in Eagle County, and healthy streams and rivers in the Eagle River basin is to convey the Reservoir Company stock to the Authority subject to the terms and conditions of this Agreement.

Agreement

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Conveyance. Simultaneous with the execution of this Agreement, the County shall execute and deliver to the Authority the Stock Assignment for the Reservoir Company stock attached hereto as Exhibit A.

2. Assessment Payment. The Authority shall pay to the Eagle Park Reservoir Company the sum of $68,029.31, which is the amount of the County's current unpaid assessment for the Reservoir Company stock.

3. Use of Reservoir Company Stock. The Reservoir Company stock shall be used by the Authority to satisfy the water rights dedication requirements of developments in the

Authority service area that provide affordable, employee, or workforce housing units as defined by Eagle County's adopted Affordable Housing Guidelines and conserve water, or projects that promote healthy streams and rivers in the Eagle River basin.

(a) To ensure that the Reservoir Company stock is utilized for these intended purposes, the parties shall undertake the following procedure for any development that seeks to use a portion of the Reservoir Company stock:

i. When the Authority receives a request to provide water service to a proposed development within the Authority service area which will include affordable, employee or workforce housing that conserves water, or a project that enhances stream and river health (the "proposed project"), the Authority will determine how much of the Reservoir Company stock will be required to serve the proposed project. Once that determination is made, the Authority will send to the Eagle County Attorney and the Eagle County Housing Director a letter that sets forth (1) a description of the proposed project, (2) the amount of the Reservoir Company stock that will be required to serve the proposed project, (3) whether and how the proposed project conserves water or how the proposed project enhances stream and river health, and (4) the amount of in-basin storage water that will be required to serve the entire proposed project.

ii. After receiving the foregoing letter, the General Manager of the Authority or the General Manager's designee and the employees of the County designated by the Eagle County Attorney shall meet to determine what amount, if any, of the Reservoir Company stock can be used for the proposed project, and whether the cash in lieu fee for the Reservoir Company stock should be waived in whole or in part. In making these determinations for a housing development, the parties shall consider the guidelines attached hereto as Exhibit C. The County shall have the final decision making authority on these matters.

iii. To be considered an affordable, employee or workforce housing unit, the unit shall comply with the County's adopted Affordable Housing Guidelines, as amended from time to time.

iv. The Authority will provide an annual accounting to the County of the Reservoir Company stock until the entire amount has been dedicated to qualifying proposed projects.

(b) The County may use up to 100 shares of the Reservoir Company stock for its own projects at no cost. The Authority will notify Eagle County in the event that the balance of the Reservoir Company stock is 25 acre-feet (250 shares).

4. Use of Cash in Lieu Fee. Any cash in lieu fee obtained by the Authority for the Reservoir Company stock shall be used by the Authority to pay for the development of additional in-basin storage.

5. Notice. Any letters or notices provided hereunder shall be addressed as follows:

For the County: Eagle County Attorney
P.O. Box 850
500 Broadway
Eagle, Colorado 81631

with a copy to: Eagle County Housing Director
P.O. Box 850
500 Broadway
Eagle, Colorado 81631

For the Authority: Upper Eagle Regional Water Authority
846 Forest Road
Vail, Colorado 81657
c/o General Manager

6. Press Release. The parties shall issue the joint press release attached hereto as Exhibit B.

7. Specific Performance. The terms of this Agreement shall be specifically enforced.

8. Modifications. The parties agree that any modifications of this Agreement shall be effective only when made in writing signed by both parties.

9. Entire Agreement. This Agreement and any other documents made or given in connection herewith or therewith constitute the entire understanding and agreement between the parties with respect to the matters provided for herein and supersedes all prior written or oral understandings and agreements between the parties with respect thereto.

Executed as of the date first set forth above.

COUNTY OF EAGLE, STATE OF COLORADO,
By and Through Its BOARD OF COUNTY COMMISSIONERS

DocuSigned by:

By: Kathy Chandler-Henry
86A091FFE8B4403...
Kathy Chandler-Henry, Chair

Attest:

DocuSigned by:

By: Regina O'Brien
E9D62F246B96440...
Regina O'Brien, Clerk to the Board

Upper Eagle Regional Water Authority

By George Gregory
George Gregory, Chair

Attest:

By: Catherine L. Hayes
Catherine L. Hayes, Secretary to the Board

112074

Exhibit A

SPECIAL WARRANTY DEED AND ASSIGNMENT

For ten dollars and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Board of County Commissioners of Eagle County, Colorado ("Grantor") hereby sells, grants, transfers, and assigns to the Upper Eagle Regional Water Authority ("Grantee"), whose address is 846 Forest Road, Vail, Colorado 81657, 874.3976 shares of Class A Series 2 stock (the "Subject Shares") in the Eagle Park Reservoir Company ("Company"), which are represented by Certificate No. 56 and 60 (copy attached as Exhibit 1), together with all associated water rights, rights for the use of water, and other rights represented by the Subject Shares, and warrants title to the same against all persons claiming under Grantor. Grantor does hereby irrevocably constitute and appoint the Secretary of the Company to transfer said Subject Shares upon the books of the Company with full power of substitution in the premises.

Executed as of this _____ day of _____, 2020.

GRANTOR:

BOARD OF COUNTY COMMISSIONERS OF EAGLE COUNTY, COLORADO

_____
Kathy Chandler-Henry, Board Chair

Attest:
By: _____
Regina O'Brien, Clerk to the Board

The shares represented by this Certificate are subject to provisions on the reverse side.

INCORPORATED UNDER THE LAWS OF

COLORADO

NUMBER 56

SHARES 760

EAGLE PARK RESERVOIR COMPANY

Shares are with $1.00 par value

This Certifies that Board of County Commissioners of Eagle County, Colorado is the owner of 760 Class A, Series 2 Shares of the Capital Stock of Eagle Park Reservoir Company

FULLY PAID AND NON-ASSESSABLE

transferable only on the books of the Corporation by the holder hereof in person or by Attorney upon surrender of this Certificate properly endorsed.

In Witness Whereof, the said Corporation has caused this Certificate to be signed by its duly authorized officers and its Corporate Seal to be hereunto affixed this 22nd day of April A.D. 20 10

Secretary

President

EXHIBIT 1

The shares represented by this Certificate are subject to Article 11.2 of the Articles of the Incorporation of the Eagle Park Reservoir Company.

No shareholder shall object to another shareholder's use of water from Eagle Park Reservoir or other water to which such other shareholder is entitled by virtue of its ownership of common stock in the Corporation by direct use, augmentation, exchange, replacement or substitution.

CERTIFICATE FOR

SHARES OF CAPITAL STOCK

ISSUED TO

DATED

For Value Received, ____ *hereby sell, assign and transfer unto* _____

_____ *Shares of the Capital Stock represented by the within Certificate, and do hereby irrevocably constitute and appoint* _____ *Attorney to transfer the said Stock on the books of the within named Corporation with full power of substitution in the premises.*

Dated _____ ____

In presence of

_____

_____

NOTICE: THE SIGNATURE OF THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE, IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT, OR ANY CHANGE WHATEVER.

EXHIBIT 1

The shares represented by this Certificate are subject to provisions on reverse side.

INCORPORATED UNDER THE LAWS OF

COLORADO

NUMBER 60

SHARES 114.3976

EAGLE PARK RESERVOIR COMPANY

Shares are with $1.00 par value

This Certifies that **Eagle County, Colorado** is the owner of

114.3976 Class A, Series 2 Shares of the Capital Stock of

FULLY PAID AND NON-ASSESSABLE

transferable only on the books of the Corporation by the holder hereof in person or by Attorney upon surrender of this Certificate properly endorsed.

In Witness Whereof, the said Corporation has caused this Certificate to be signed by its duly authorized officers and its Corporate Seal to be hereunto affixed this 5th day of April A.D. 2018

Catherine L Hayes
Secretary

George Gregory
President

EXHIBIT 1

Exhibit B
Press Release

County to convey water rights to support affordable housing; water authority to hold 87-acre feet of water for suitable projects

Kim Bell Williams
Eagle County Housing Department
Eagle County Housing and Development Authority
970-328-8773

Linn Brooks
ERWSD General Manager
970-476-7480

July 28, 2020 - Eagle County Government will convey approximately 87 acre feet of water rights it owns in Eagle Park Reservoir to the Upper Eagle Regional Water Authority to be allocated to affordable housing projects or to projects that promote river health in Eagle County. The current value of the water is just over $3.45 million.

The county owns shares in the Eagle Park Reservoir Company and has decided to convey the stock to help further some of its strategic goals. Specifically, the stock shall be used by the authority to satisfy the water rights dedication requirements of developments within its service area that provide affordable, employee or workforce housing units as defined by the Eagle County Affordable Housing Guidelines and Administrative Procedures and that achieve water conservation goals, or for projects that enhance the health of streams and rivers in the Eagle River basin.

The Eagle Board of County Commissioners continues to identify quality workforce housing and river health as strategic areas of focus. The authority provides water service to properties from Eagle Vail to Cordillera; and also owns shares in Eagle Park Reservoir Company to allot water to new development within its service area. The newly conveyed shares from Eagle County will only be allocated to projects that meet the criteria outlined in the agreement between the county and the authority.

Officials say the county and the authority were natural fits for the partnership as both organizations are leaders in the efforts to bring affordable housing and water efficiency and conservation projects to fruition in Eagle County. The Eagle River Water & Sanitation District, which manages the authority, has created 58 housing units since 1996, including the 21-unit Stillwater project they completed last year in Edwards. Eagle County has partnered to create and currently oversees over 700 workforce and senior housing units including Miller Ranch, Lake Creek Village, Seniors on Broadway, Golden Eagle Apartments and Riverview Apartments.

Additionally, the county anticipates opening Two10 @ Castle Peak, a 22-unit LEED gold certified apartment complex, to tenants in August.

“We are excited to enter into this partnership and collaboration to support the expansion of new high quality housing options for our local workforce and to improve river health in the Eagle River basin,” said Linn Brooks, ERWSD General Manager.

“In these times of economic uncertainty, we believe the conveyance of the Reservoir Company stock is a creative solution to lowering the barrier to attainable housing, achieving water conservation goals, and promoting river health in Eagle County,” said Eagle County Commissioner Kathy Chandler-Henry.

Eagle County Commissioner Jeanne McQueeney noted the need to make all investments go further. “We feel the dedication of the Reservoir Company stock is a way to do that. It encourages public/private partnerships to address community needs and some of our most critical strategic priorities.”

“We are hopeful and confident that this program will be a catalyst and incentive for developers to pursue affordable housing projects that achieve water conservation goals and improve stream health,” said Eagle County Commissioner Matt Scherr.

For more information, contact Linn Brooks at 970-476-7480 or the Eagle County Commissioners at 970-328-8605.

Exhibit C

Guidelines

1) The Reservoir Company stock will be utilized to meet the water dedication requirements of the Upper Eagle Regional Water Authority for proposed projects proportionate with the number of deed restricted units (i.e. a development providing 35% of deed restricted units will obtain water service utilizing the Reservoir Company stock for 35% of that development's water requirements) under the following cost tiers:

    a) 100% of the cash in lieu fee for in-basin storage water of the Upper Eagle Regional Water Authority shall be waived if the units are price capped for sale at or below 100% of Area Median Income ("AMI") and/or if units are price capped rental at or below 80% AMI;
    b) 75% of the cash in lieu fee for in-basin storage water of the Upper Eagle Regional Water Authority shall be waived if the units are price capped for sale at 101-120% of AMI and/or if units are price capped rental at 81-100% AMI;
    c) 50% of the cash in lieu fee for in-basin storage water of the Upper Eagle Regional Water Authority shall be waived if the units are price capped for sale at 121-140% of AMI.

2) The proposed projects that receive water service utilizing the Reservoir Company stock may be either "for sale" or rental projects.

3) All proposed projects that receive water service utilizing the Reservoir Company stock must also comply with and be ranked according to priorities for water conservation or river health as established by the Upper Eagle Regional Water Authority.

4) Modifications to the AMI percentages above may only be done through agreement of Eagle County and the Upper Eagle Regional Water Authority, in writing.

5) In the event a proposed project does not meet the criteria to receive water service utilizing the Reservoir Company stock, on a case-by-case basis, the parties can determine together if such proposed project should receive water service utilizing the Reservoir Company stock.

WATER DEMAND WORKSHEET

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

Note to Applicant: Please complete all information highlighted in blue. Additional comments to be entered on the Comments worksheet.

Project Name:	Colorado Sate Land Board - Dowd Junction Parcels		
Contact Person:	Greg Ochis, Assistant Director for Asset Management		
Telephone:	303-866-3454 X3309	**Date:**	12/5/2023

Description of Proposed Project:

Approximately 700 Community Housing Units phased over multiple years on 8 parcels of land owned by the Colorado State Land Board. The project is to be annexed into the Town of Avon which will be the municipal entity responsible for annexation and entitlements of project. The parcels are located along and adjacent to US Highway 6 with some parcels located north of the Eagle River and Union Pacific Railroad. Some of the parcels along the highway are under existing ground leases with the Land Board and the initial phases of the project are on land currently occupied by several mobile homes used by CDOT employees. Other portions of the holdings are undeveloped. A portion of the land north of the Eagle River is proposed to be a passive open space tract. (See Attached Zoning Plan)

Location of Proposed Project (qtr qtr section, township, range, lot/filing) (attach legal description):

Section X, T-5-S, R-84-W

Total Area (square feet or acres):

Development Area = Approximately 39 acres,

Has this area been annexed to a metropolitan district or town?	**Yes**	Submitted
	No	
If yes, identify:	Town of Avon	
Is this project a redevelopment of existing lots and structures?	**Yes**	partially
	No	

If yes, identify by water/sewer billing address:

1. RESIDENTIAL INDOOR WATER DEMAND

A. Detached single family lots (number):		
Average lot size:		square feet
B. Average floor area of house:		square feet
(inclusive of garage and unfinished basement)		
C. Greater of A or A x B / 3,000:	0.0	single family equivalents (SFEs)
D. In-house demand @ 350 GPD/SFE (C x 0.3921):	0	acre-feet per year
E. Multi-family units (number):	685	(700-15 sfe's exist.)
(inclusive of duplex, condominium, and apartment units)		
F. Average floor area of unit:	1,000	square feet
(inclusive of garage and unfinished basement)		
G. Greater of E or E x F / 3,000:	685.0	single family equivalents (SFEs)
H. In-house demand @ 200 GPD/SFE (G x 0.2240):	153.46	acre-feet per year
I. Total In-house demand (D + H):	**153.46**	acre-feet per year

2. IRRIGATION WATER DEMAND

Project Name: Colorado Sate Land Board - Dowd Junction Parcels

A. Average irrigated area per detached single family lot:	0	square feet
B. Irrigated area (1A x 2A / 43,560):	0.00	acres
C. Average irrigated area per multi-family unit:	299	square feet
D. Irrigation Right Of Way	0.13	acres
E. Subtotal:	3.59	acres
F. Other irrigated areas:		
1. Irrigated parks	0.46	acres
2. Irrigated Turf Field	0.75	acres
3. Common space		acres
4. Total other	1.21	acres
G. Total irrigated areas:	4.80	acres
H.Total irrigation demand:	**6.62**	acre-feet

(Assumes 30" or irrigation water for "Parks" (section 2.F.4) and 12" of irrgation water for line 2.E.)

Describe irrigation methods (sprinkler, drip, etc.) & Type of irrigated area(s):

Assumed to be considered "efficient" irrigation such as rotary spray heads for parks and lawn areas and drip for shrubs and trees

From Pedro Campos (1-30-24 Email):
Below is an additional breakdown of landscape areas for the water demand calculation:

The irrigated turf area for the playing field at the Tract K Park would be around 0.75 acre.

Factoring the maximum irrigated area allowed by the new Avon landscape code (5,000 sf per lot) for the entire development, the following are the irrigated landscape areas derived:

(4) Parks (Tracts L, M, N, K) x 5,000 sf = 0.46 ac + 0.75 acres of turf for field = 1.21 acres total. This is the area that should be assigned the higher irrigation rate as it would be 'functional turf' areas within the parks for active / passive play.

(9) Development parcels (Tracts A, B, C, D, E, F, I) x 5,000 sf = 1.03 acres total. This area would receive less water, and be efficient low water consumptive landscaping on drip / micro spray (no turf areas).

Tract H will likely be broken down into (26) Duplexes and (3) Multifamily lot for a total of 29 lots. These area would also receive less water.

(26) Duplexes x 3,500 sf per building = 2.09 acres
(3) Multifamily lots x 5,000 sf per lot = 0.34 acres

The Grand total using these calculations is 4.67 acres. The previous estimate of 4.8 acres was fairly accurate if some landscaping for the rights of way is also factored in.

Please confirm if the above calculations are acceptable and if you have any questions or concerns

3. OTHER OUTDOOR WATER USES

A. Pond water surface area:	0	square feet
B. Fountain water surface area:	0	square feet
C. Swimming pool:		
1. Surface area	0	square feet
2. Volume	0	gallons

4. OTHER INDOOR WATER USES

Type			Annual Requirement (acre-feet)	
A. Retail	60,000	square feet	6.72	0.10 gpd/sqft
B. Office		square feet	0.00	0.16 gpd/sqft
C. Warehouse or storage		square feet	0.00	0.06 gpd/sqft
D. Motel/hotel without kitchens		guest rooms	0.00	100 gpd/room
E. Motel/hotel with kitchens		guest rooms	0.00	150 gpd/room
F. Restaurant		seats	0.00	35 gpd/seat
G. Tavern		seats	0.00	20 gpd/seat
H. Other (describe)				

Project Name: Colorado Sate Land Board - Dowd Junction Parcels

I. Total other indoor usage **6.72** acre-feet

Describe below the expected number of employees/guests/daily hours and anything that impacts the number of people using the facilities or special featurs such as swimming pools, hot tubs, or other indoor water features (use the Comments worksheet if more space is needed):

Project Name: Colorado Sate Land Board - Dowd Junction Parcels

5. AVERAGE ANNUAL CONSUMPTIVE USAGE (FOR ERW&SD STAFF USE)

	Demand (acre-feet)	Consumptive Use (acre-feet)
A. Indoor usage	160.18	8.01
B. Irrigation usage	6.62	5.30
C. TOTAL	**166.80**	**13.31**

APPLICANT:

Project Name: Colorado Sate Land Board - Dowd Junction Parcels

Original Submittal By: Greg Ochis, Assistant Director of Asset Management
(Owner/Authorized Representative)

Date: 11/30/2023

DISTRICT:

Form Modified By: Micah Schuette
(ERW&SD Employee)

Date: 2/7/2024

Disclaimer: *Eagle River Water & Sanitation District and Upper Eagle Regional Water Authority retain the right to revise the factors and cash-in-lieu payments.*

Additional information, explanations and comments:

Irrigation section modified by staff to represent 30 inches of irrigation in the "higher use" turf areas in parks and 12 inches for remainder per Town of Avon Irrigation Design Budget

WATER RIGHTS DEDICATION REQUIREMENTS OR CASH IN LIEU

Eagle River Water & Sanitation District and Upper Eagle Regional Water Authority

(values in acre-feet)

Note to Applicant: This worksheet to be completed by ERWSD personnel.

Project Name: Colorado State Land Board Parcels - Community Housing Project

Date: 2-12-24

Wastewater treated at: **Avon WWTP**

Component	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential Indoor Usage	13.03359	11.77227	13.03359	12.61315	13.03359	12.61315	13.03359	13.03359	12.61315	13.03359	12.61315	13.03359	153.46000
Other Indoor Usage	0.57	0.52	0.57	0.55	0.57	0.55	0.57	0.57	0.55	0.57	0.55	0.57	6.72000
Irrigation Usage	0.00	0.00	0.00	0.00	0.95	1.49	1.70	1.37	0.95	0.17	0.00	0.00	6.62000
Other Outdoor Usage													
Total Demand	13.60359	12.29227	13.60359	13.16315	14.55359	14.65315	15.30359	14.97359	14.11315	13.77359	13.16315	13.60359	166.80000
Total Consumptive Use	0.68018	0.61461	0.68018	0.65816	1.44018	1.85016	2.04018	1.77618	1.41816	0.81618	0.65816	0.68018	13.31251
Dedication Requirement @ 120%	0.81622	0.73753	0.81622	0.78979	1.72822	2.22019	2.44822	2.13142	1.70179	0.97942	0.78979	0.81622	15.97503

Cash in Lieu of Water Rights Payment: **$1,133,988**

Cash in Lieu of Water Rights Deposit: **$283,497**

Row description:

Residential Indoor Use: The annual total comes from Section 1 in the "Water Demand Worksheet". The annual amount is distributed monthly based on number of days in month.

Other Indoor Usage: The annual total comes from Section 4 of the "Water Demand Worksheet". The annual amount is distributed monthly based on number of days in month.

Irrigation Usage: The annual total comes from Section 2 of the "Water Demand Worksheet". The annual amount is distributed monthly based on the ratio of estimated monthly consumptive use to annual consumptive use: May 14%, June 23%, July 26%, August 21%, September 14%, October 2%.

Other Outdoor Usage: The annual total comes from Section 3 of the "Water Demand Worksheet". The annual amount is distributed monthly depending on the type of other use and must be analyzed on a project specific use.

Total Demand: Sum of the 4 use types.

Total Consumptive Use: Monthly Indoor use x 5% + Irrigation Use x 80% + Outdoor Use (dependent on specific use).

Dedication Requirement: Total Consumptive Acre-Foot of Water Use

Cash in Lieu of Water Rights Payment: $70,985 per consumptive acre-foot of water of Dedication Requirement

Notes:

The values used in the Cash in Lieu calculation are taken from the most recent ERWSD Resolution on Water Dedication Rates effective January 1, 2024

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

BOARD ACTION REQUEST

TO: Eagle River Water and Sanitation District, Board of Directors

Upper Eagle Regional Water Authority, Board of Directors

FROM: Tim Friday, Planning & Water Resources Manager

Ivy Todd, Plan Review Engineer

DATE: February 22, 2024

RE: 2024 Rules and Regulations Revisions

Summary of Subject: Update to the Rules and Regulations with revisions to the Main Body and several of the Appendices.

Discussion and Background: The Construction Review Team (CRT) has developed a process to update the Rules and Regulations that provides for timely annual revisions. These revisions are presented to the Board near the beginning of each year in an effort to continuously improve upon our construction standards and regulations so that they remain current with industry standards, best practices, and other applicable regulations. Revisions are proposed to the Rules and Regulations in Articles II, III, IV, V, VI, VII, VIII, IX and XI, and Appendices A, B, C, D, F and G, and the Engineers Resources document. Revisions are summarized in a 6-page summary document and the full text of revisions is included in the attached supporting documentation. These revisions were presented to and reviewed by the Rules and Regulations Subcommittee at a meeting on January 12, 2024, and a follow up email was sent on January 30, to the subcommittee to answer their questions that weren't addressed during the meeting.

To be more transparent and to include affected stakeholders in the revision process, an online meeting was held on January 30, 2024, with local land use agencies, engineers, excavators, developers, and builders who perform work on water and wastewater infrastructure within the service area. Of the 69 people invited, 24 attended, representing approximately 15 different companies/organizations. The proposed revisions were presented and discussed with the attendees. Several questions were asked, and appropriate answers were provided. None of the questions or comments resulted in any further revisions to the Rules and Regulations.

Alternatives: Leaving the Rules and Regulations as is or suggesting further revisions.

Legal Issues: Legal Counsel has reviewed the revisions, and no changes were requested.

Budget Implication: None

Recommendation: Staff recommends that the Board approve the revised Rules and Regulations, as presented.

Suggested Resolution and Motion: **I move to approve the revisions to the Rules and Regulations as presented for 2024.**

Attached Supporting Documentation:
Summary of Proposed Revisions
Rules and Regulations Articles II, III, IV, V, VI, VII, VIII, IX and XI Revised Sheets
Appendices A, B, C, D, F and G Revised Sheets

Thank you for your consideration of these revisions and please let us know if you have any questions or comments regarding the proposed revisions.

EAGLE RIVER
WATER & SANITATION
DISTRICT

2024 Rules and Regulations Revisions

Summary – February 2024

1. **Main Body**
    - 2.7 Approved Backflow Prevention Device – definition was deleted because it is covered in 2.15.
    - 2.15 Backflow Prevention Device – revised terminology to "Backflow Prevention Assembly" and slightly modified the wording in the definition. Updated "device" to "assembly" in all backflow related instances.
    - 2.16 Base Rate – revised to "Service Charge" and updated definition accordingly. This shall be moved to the correct location (alphabetical order).
    - 2.42 Debt Service Rate - "rate" was revised to "charge" to be consistent with terminology used by Finance.
    - 2.44 Development Review Coordinator – this definition was deleted and replaced with "Plan Review Engineer" and will be moved to the appropriate location.
    - 2.71 Irrigation – the definition of an irrigation account is redefined as an "Irrigation-Only Account," and an explanation was added to explain how tier volumes are calculated based on the irrigated area.
    - 2.73 Landscape Sprinkler Account – this definition was deleted.
    - 2. XX Plan Review Engineer term was added with a similar definition to the development review coordinator and all definitions after will be renumbered.
    - 2.81 Preconstruction Conference – this term was revised to "preconstruction meeting" and the definition was updated accordingly.
    - 2.XX Regional Facilities – this definition was added.
    - 2.106 Tiered Rate Structure – language was deleted about tier volumes multiplied by the number of SFEs for individually metered residential accounts.
    - 2.109 Usage Rate – this term was changed to "Water Use Rate" and moved it to the proper location.
    - 2.116 Wastewater Service - "Wastewater Service" was changed to "Wastewater Service Line."
    - 2.121 Water Service – was changed to "Water Service Line" and the definition was updated accordingly.
    - 3.2 Compliance with Industrial Pretreatment Requirements – changed "Appendix E" to "Appendix F" in the last sentence of the paragraph.
    - 4.5.20 Landscape Irrigation Accounts – this section was revised to reflect consolidation of the various irrigation account types into "irrigation-only" accounts.

- 5.6 Base Service, Debt Service and Usage Rates – this section was revised to eliminate the tier volume being tied to the number of SFEs ("SFE multiplier") associated with the account.
- 5.7 Charges Related to Turn-On and Turn-Off of Service – the language was updated and revised to be clearer.
- 5.11.1 Collections on Delinquent Accounts – District Notices and Actions– the language was aligned to match best practices in Finance for how we handle delinquent accounts.
- 6.9.10 Fire Hydrant Meter Assemblies – this section was updated to include "No enclosures shall be permitted." If construction water is needed after October 15th a temporary service line meter vault shall be used.
- 6.9.14 Irrigation Permits – temporary suspension of irrigation permits will continue in 2024. The text in this section was deleted but left the section header and note about the program suspension.
- 6.10.5 Grease Interceptor - added "See Appendix F for program requirements" to the second paragraph in this section.
- 8.1 General – updated the application portal link to the new website and added bullet points to which the development approval process describes for clarity.
- 8.2 Initiation of Development Approval Process- Clarified language by removing the need to the conceptual plan to show adjoining properties.
- 8.2 Initiation of Development Approval Process- Language was added to clarify that payment of the applicable fees are required to initiate a project for review.
- 8.2 Initiation of Development Approval Process- Language was added to include total acreage of irrigated area in the required description of land use.
- 8.4 Water Rights Dedication Analysis- Language was added to clarify that the applicable application fee shall be paid for the water rights dedication analysis.
- 8.4 Water Rights Dedication Analysis- Language was added for applicants to include water court decrees in water right dedication analysis applications.
- 8.6 Determination of Treated Water Storage Dedication- Language was updated to clarify the intent of impact fees being used to fund the design and construction of new and existing storage capacity.
- 8.7 Ability to Serve or Conditional Capacity to Serve Letter- deleted "Ability to Serve" and added language clarifying the process in how to obtain a conditional capacity to serve letter.
- 8.8 Ability to Serve Letter- A new section was added to separate the processes of obtaining an ability to serve letter and a conditional capacity to serve letter.
- 8.7.1 Conditional Capacity to Serve Letter – This section was deleted and replaced above in section 8.7.
- 9.1 General – updated the application portal website and the plan review engineer (fka development review coordinator) contact information.

- 9.2.1 Construction Plan Submittal Requirements – added detail on master plan requirements to ensure proposed developments are approved in concept before proceeding to the completion of construction documents.
- 9.2.4.1 Regional Facilities – A new section was added that describes the districts regulations for regional facilities within the district service area.
- 9.3 (b) Initiation of Construction and 9.3.4 Bypass System Requirements – added detail on what is required for a wastewater collection system bypass.
- 9.3.4 Bypass System Requirements- A section was added that described the bypass system requirements.
- 9.4.1 Construction Acceptance Submittal Requirements, Drawings of Record - updated the list to add ownership status of mains, water service tap location, fire hydrant flange elevation, fire hydrant lateral invert elevation, fire hydrant extensions, fire hydrant ownership status, vault type, utility crossings shown, secondary containment shown, fats, oils and grease (FOG) infrastructure included and shown, and removal of fire hydrant size.
- 9.4.3 Construction Acceptance Letter - "Regulations Administrator" was changed to "Construction Review Team."
- 11.4 Dry Year Response – deleted the reference to special irrigation permits.
- 11.5 Resource Protection Response Restrictions – deleted "no new special irrigation permits will be used."
- 11.7 Reconnection of Water Service – deleted this section due to it being duplicative and referred to section 1.11 "Reinstatement of Service" in previous paragraph (11.6).

2. Appendix A

- See revised rates and fees schedule.

3. Appendix B - Water and Wastewater Service Construction Specifications

- 2.1.3 Polyethylene Tubing – the language was revised to clarify that new polyethylene service lines shall be one continuous piece from curb stop to the meter assembly.
- 2.3 Separation of Services – this section was revised with new language to match CDPHE regulations and to make it clearer what is required.
- 2.4.1 Service Line Insulation Requirements - updated language to make it clearer.
- 2.8 Curb Stop Location – added language that curb stops shall not be underneath heated driveways.
- 2.11 Water Service Line Abandonment - added language that the corporation stop must also be capped during and abandonment. Language was also

specified that the coordination for a mainline shut down shall be with a district inspector.

- 2.12 Meter Assemblies – added language that strainers shall not be allowed immediately before or after the meter.
- 2.12.4 Backflow Prevention Devices – added language that for new construction in commercial applications, all backflow preventers must be reduced pressure zone (RPZ) assemblies. Language also was added for backflow assemblies to be lead free.
- 2.12.5 Water Meter – language was added to prohibit yokes and corner horns in new construction, and for straight pipe requirements before and after the meter.
- 3.4 Depth of Bury – updated the language to clearly state that the minimum depth of bury remains at 4.5 feet and the maximum depth of bury remains at 14 feet.
- 3.8 Wastewater service connections - language was added to clarify that connections will not be made to the sewer main when the sewer main is less than 4.5 feet deep.

4. Appendix C - Standard Specifications for Water Mains

- 2.3 Sizing Distribution Mains – language was added that shall require the developers and or property owners to construct up to 12-inch water mains at no cost to the District.
- 2.6.2 Fire Hydrants – the terminology was changed to refer to “branch lines” as “laterals.”
- 2.6.5 Joint restraint – the use of joint restraints was clarified by adding the description “at all bends and fittings.”
- 2.6.7 Depth of Bury - the word “mains” was added to specify what the section was talking about and a reference to 2.6.13 (insulation requirements) was added.
- 2.6.X Parallel Pipes and Crossing Pipes - a section was added for parallel pipes and crossing pipes to match CDPHE regulations and to make it clearer what is required for these situations.
- 2.6.9 Abandonment of Existing Water Mains and Valves – the heading was changed by adding the word “appurtenances” to the list. Further descriptions were added to expand on proper fire hydrant abandonment.
- 2.6.13 Main Insulation requirements - the language was updated to clarify that the absolute minimum bury depth of a water main shall be 5 feet when insulation is used.
- 2.6.16 Encased Pipes – a reference was added to the section 2.6X (parallel pipes and crossing pipes).

- 4.12.1 Valve Box Installation - language was added to prohibit internal screws from being put into valve boxes and language was added that the valve box elevation must be approved by the field inspector.
- 4.13.1 Fire Hydrant Installations - the terminology was changed from “branch line” to “lateral.”
- 4.13.2 Fire Hydrant Anchorage - the terminology was changed from “branch line” to “lateral.”
- Form C-1 – Pre-construction meeting checklist – a check box and statement was added to the checklist that “Contractors are not permitted to operate valves or curb stops.”

5. **Appendix D - Standard Specifications for Sewer Mains**
    - 2.4.3 Depth of Bury- language was added to clarify that the absolute minimum depth of bury of a sewer main with insulation is 3 feet and to clarify that sewer taps are not allowed where the sewer main is less than 4.5 feet deep.
    - 2.6.3 This entire section was deleted and replaced with a rewritten section for parallel pipes and crossing pipes that meet CDPHE regulations and is consistent with all appendices.
    - 3.2.2 (b) Polyvinyl Chloride (PVC) pressure pipe - the specified C900 pipe was replaced with AWWA C909 molecularly oriented polyvinyl chloride (PVCO) pressure pipe.
    - 5.4 Television Inspection- Clarified language of low spots by adding the word “sags.”
    - 5.7 Manhole Abandonment – language was added to allow a cured-in-place-pipe (CIPP) plug as an acceptable form of manhole abandonment. Language also was added to expand the material types that can be used for manhole backfill to include screened rock, sand, and other uniformly graded material.
    - 5.8 Sewer Main Abandonment –a new section was added that describes the proper procedure for abandoning sewer mains.
    - 5.8.1 Sewer Main with Manhole Connection Abandonment - a new section was added that describes the proper procedure for abandoning sewer mains that are connected to manholes.
    - Detail 11: Water and Sanitary Sewer Separation - the detail was updated to match existing CDPHE requirements and clarify confusion on requirements.

6. **Appendix E - Earthwork and Construction Specifications**
    - No changes are proposed.

7. **Appendix F - Pollutant Discharge Regulations and Industrial Pretreatment Program**

- 1.1 Purpose and Policy – language was added to specify sewer as “sanitary sewer” and was applied throughout.
- Section Added- Section XI was added. This section specifies the controls program for fats, oils and grease

8. **Appendix G - Backflow Prevention and Cross Connection Control (BPCC) Program**
    - 2.3b Installation – language was added to specify that Reduced Pressure Backflow Preventers shall not be installed directly above the water meter. The purpose is to keep the relief port from discharging onto the water meter.
    - 2.3d Installation – language was added to specify exact clearances needed for proper access of backflow assemblies.

9. **Appendix H - Agreement for Reinstatement of Water Service**
    - No changes are proposed.

10. **Engineers Resources**
    - ERWSD Standard Plan Notes - these notes were reworked to have separate notes sections for sanitary sewer service lines, sanitary sewer service mains, water service lines and water mains.
    - An as-built checklist was added for engineers use when submitting as-builts. The checklist matches the requirements in 2024 rules and regulations main body section 9.4.1 (drawings of record).

RULES AND REGULATIONS
FOR
WATER AND WASTEWATER SERVICE

EAGLE RIVER
WATER & SANITATION
DISTRICT

Last Approved Revision: ~~March 23, 2023~~February , 2024

ARTICLE II - DEFINITIONS

Unless the context specifically indicates otherwise, the meaning of the terms used herein shall be as follows:

2.1 Ability to Serve Letter

“Ability to Serve Letter” is a letter from the District stating that it will serve a proposed use of the Water System or Wastewater System, permitted by a Land Use Authority.

2.2 Accommodation Unit

"Accommodation Unit" is one habitable room intended primarily for sleeping purposes, without a Cooking Facility, but with private access to a central corridor or the outside. Examples of an Accommodation Unit include but are not limited to a hotel room, hotel suite, hostel room, bed and breakfast room, or a lock-off unit without a Cooking Facility. An Accommodation Unit is equal to 0.35 SFE.

2.3 Air Gap

An “Air Gap” is the unobstructed separation or physical break between the supply of water from the Water System and the location of use of the water by the Customer.

2.4 Applicant

“Applicant” is any person, association, corporation, entity, or governmental entity requesting Water or Wastewater Service for premises under its control. Applicant is responsible for compliance with the District’s Infrastructure Acceptance Procedure, and for Applicant’s contractor’s performance of any and all Work.

2.5 Applicant Representative

“Applicant Representative” is the designated representative of the Applicant authorized by the Applicant to act on Applicant’s behalf with respect to Water Services or Wastewater Services to be provided to Applicant and Applicant shall be bound by the acts and representations of the Applicant Representative.

2.6 Approved

Accepted by the District as meeting the applicable specification or procedures of these Rules and Regulations.

~~2.7 Approved Backflow Prevention Device~~

~~A device that meets the criteria outlined in Appendix G of these rules and regulations and that is approved in writing by the District.~~

2.10 Auxiliary Water Supply

Any water supply on or available to the premises other than that which is provided directly from the Water System. Auxiliary water supplies may include, but are not limited to, water from the District's Drinking Water System over which the District does not control the water quality, such as where an Air Gap has been made, or from any other water supply or natural source(s) such as a well, spring, river, stream, pond, or lake.

2.11 Availability of Service Letter

A letter required by a land use Authority for a building permit application to demonstrate that water and wastewater mains are within the vicinity of the property and that water and wastewater service will be provided to the property upon payment of impact fees.

2.12 Back Pressure

Backflow caused by a pump, elevated tank, boiler, or "head" in pipe, or any means that creates greater pressure within a piping system than that which exists within the Water System.

2.13 Back Siphonage

The actual or potential reverse flow of water or contaminants into the Water System caused by negative or sub-atmospheric pressure in the Water System.

2.14 Backflow

The actual or potential undesirable reversal of the direction of flow of the water or the mixture of water and other liquids, gases, or other substances into the pipes of the Water System from any source or sources caused by Back Pressure and/or Back Siphonage.

2.15 Backflow Prevention AssemblyDevice or "Backflow Preventer"

A general term for anny assemblydevice or means designed to prevent backflow created by Bback Ppressure, Bback Ssiphonage or Bback Ppressure and Bback Siphonage acting together.

2.16 Base Service RateCharge

The "Base Service RateCharge" is a fixed billing rate charge applied per SFE to fund administration, operation, maintenance of water and wastewater., specific to a Customer's place of water use, that when applied to the Customer account's SFE multiplier, determines a portion or total of the Charge due from the Customer to the District, before inclusion of charges for water use.

2.42 Debt Service ChargeRate

The "Debt Service ChargeRate" is a billing chargerate, specific to the location of a Customer's Water or Wastewater System use, that when applied to the Customer account's SFE multiplier, determines a portion or total of the Charge due from the Customer to the District. Revenues collected by the District from debt service chargerate(s) are used by the District specifically to pay debt service on borrowed funds.

2.43 Defective Work

"Defective Work" is an installation or Work that is unsatisfactory, faulty, deficient, or does not meet the requirements of any inspection, test, or approval, or an installation or Work that has been damaged prior to acceptance by the District.

~~2.44 Development Review Coordinator~~

~~The Development Review CoordinatorPlan Review Engineer is responsible for coordination of all Construction Review Team scheduling and communication, development and maintenance of the Rules and Regulations, and approval and Acceptance of all new main line development.~~

2.45 Distribution System

"Distribution System" means District Water Mains including valves, fire hydrants, Connections, meters, service pipes from the Water Main to the curb stop or property line/easement (whichever is closer to the Water Main), and associated appurtenances, property, easements, and equipment used or to be used in distributing water to customers.

2.46 District

"District" is the Eagle River Water & Sanitation District or the Upper Eagle Regional Water Authority, as applicable.

2.47 District Engineer

"District Engineer" is any person or firm that has been authorized by the District to perform engineering services for the District.

2.48 District Inspector

"District Inspector" is any person or firm that has been authorized by the District to inspect the Water and Wastewater Systems, and the property of Customers and Industrial Users to ensure compliance with these Rules and Regulations.

biologically treated or stabilized with toxic substances; circulating heating waters or chemicals; natural waters such as from wells, springs, streams, rivers, lakes, dams, ponds, retention pits, irrigation canals or systems; oils, gases, glycerin, glycols, paraffin, caustic and acid solutions and other liquid and gaseous fluids used in industrial, fire-fighting or other purposes.

2.70 Interference

"Interference" is defined as a discharge, which alone or in conjunction with a discharge or discharges from other sources, inhibits or disrupts the Sewer System, its treatment processes or operations or its sludge processes, use or disposal; and therefore, is a cause of a violation of the District's Colorado Discharge Permit System (CDPS) permit or of the prevention of sewage sludge use or disposal in compliance with any of the following statutory/regulatory provisions or permits issued thereunder, or any more stringent state or local regulations: Section 405 of the Act; the Solid Waste Disposal Act, including Title II commonly referred to as the Resource Conservation and Recovery Act (RCRA); any state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the Solid Waste Disposal Act; the Clean Air Act; the Toxic Substances Control Act; and the Marine Protection, Research, and Sanctuaries Act.

2.71 Irrigation-Only Account

Irrigation-Only Account is defined as a ~~separately metered~~ service for any property that uses ~~uses a~~ separately metered ~~and~~ account for irrigation. ~~watering~~. All irrigation accounts are~~will be~~ billed based on the fractional acres of irrigated land where one acre equals an irrigation multiplier of one. Irrigation water is billed using a ~~5~~-tiered rate structure. ~~and~~ The amount of water in each tier is determined by multiplying each tiers~~the base tier~~ volume by the accounts' ~~SFE~~irrigation multiplier. Tier volumes are defined in Appendix A. ~~(note that tier volumes can be smaller or larger than base tiers depending on the size of the property receiving irrigation service).service is defined as a separately metered service for a property not associated with a structure(s), which shall be subject to irrigation service rates.~~

2.72 Isolation

The control of a Cross-Connection within a building's plumbing system by the installation of an Approved Backflow Prevention Assembly ~~Device~~ or means or methods at the potential sources of Contamination.

~~**2.73 Landscape Sprinkler Account**~~

~~Landscape Sprinkler Account service means a separately metered water service for a property associated with a structure(s) for which Connection Fees have been paid. Examples include common area irrigation systems serving condominiums and townhomes.~~

2.73 Land Use Authority

A Land Use Authority (LUA) is a division of local government; county, towns, and special purpose districts that have been delegated legal authority by the state to adopt and administer land use regulations and local land use plans.

2.74 Major Facility

A Major Facility is any infrastructure determined to be critical to the District's mission to provide water and wastewater service to customers. Examples of Major Facilities include treatment facilities, raw water supplies, storage facilities, wells, pumping facilities, lift stations, pressure reducing valves (PRVs) and PRV Vaults and others as determined by the District.

2.75 May

Whenever "may" is used herein, it shall be construed as a permissible, but not mandatory direction.

2.76 Mixed-Use Facility

A "Mixed-Use Facility" is a structure containing one or more Residential Units, Accommodation Units, Efficiency Units or Studio Units, and one or more Commercial Units.

2.77 Non-Potable Water

Water that is not safe for human consumption or that does not meet the requirements set forth in the State of Colorado Primary Drinking Water Regulations.

2.78 Pass Through

"Pass Through" is defined as a discharge which exits the Wastewater Treatment Plant into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the District's CDPS permit, including an increase in the magnitude or duration of a violation.

2.79 Pollution – see Contamination

2.XX Plan Review Engineer

The Plan Review Engineer is responsible for coordination of all Construction Review Team scheduling and communication, development and maintenance of the Rules and Regulations, and approval and acceptance of all new main line development.

2.80 Potable Water

Water that meets the regulatory standards of the Colorado Department of Public Health and Environment and the Environmental Protection Agency for drinking water.

2.81 Preconstruction Meeting~~Conference~~

A "Preconstruction Meeting~~Conference~~" is a mandatory meeting including the Applicant, Applicant's contractor, excavator, engineer, and District Inspector during which materials, installation methods, and schedule for construction is discussed and agreed upon. The Preconstruction meeting~~Conference~~ will be scheduled a minimum of three (3) days after final approved plan submittal.

2.82 Pretreatment Standard or Standards

"Pretreatment Standards" shall mean prohibited discharge standards, categorical pretreatment standards, and local limits.

2.83 Private Service Mains

"Private Service Main" is any wastewater collector, or any water distribution main that is connected to the District system but not accepted for District ownership, operation, maintenance or repair. Generally, such an installation is designated as private because: (a) it does not conform to the specifications in these Rules and Regulations and the District's Standard Specifications for Main Construction; (b) it is not in the best interest of the District to accept the Main because of special and/or mitigating circumstances; (c) legal title to the Main cannot be transferred free and clear to the District; or (d) the owner of the Main does not wish to convey the Main to the District. In order to protect the Public Water System, private water service mains must be isolated from the system via an approved B~~b~~ackflow P~~p~~revention Assembly~~device~~ and metered via a master meter. Responsibility for operation, maintenance and repairs of private service mains is the responsibility of the properties connecting to such main for service.

2.84 Prohibited Discharge Standards or Prohibited Discharges

"Prohibited Discharge Standards" or "Prohibited Discharges" are absolute prohibitions against the discharge of certain substances; these prohibitions appear in Section 2.1 of Appendix F, Pretreatment Program Regulations.

2.85 Public Use Facility

"Public Use Facilities" include facilities operated by Eagle County, any municipality, a special district, schools, churches or other facilities designated for and open for use by the public.

2.86 Reduced Pressure Principle AssemblyDevice, Reduced Pressure Zone AssemblyDevice ("RPZ")

An assembly of two independently operating Approved Check Valves with a hydraulic automatic operating differential relief valve between the two Check Valves. The assembly shall be located between two tightly closing (resilient seated) shut-off valves and have four properly located test cocks for the testing of the check and relief valves. The entire assembly shall be an Approved Backflow Prevention AssemblyDevice.

2.XX Regional Facilities
"Regional Facilities" are water and/or wastewater systems which provide, or are intended to provide affordable, high quality drinking water and wastewater service to a large population area or more than one service area. Regional facilities provide benefits such as increased economies of scale; operational, administrative, and managerial efficiencies; integration of water resource management; robust regulatory compliance programs; and improved system redundancy. Further, regional facilities can avoid duplicative capital and operating costs associated with interim, non-regional water and wastewater system alternatives.

2.87 Regulations Administrator

The "Regulations Administrator" is an employee of the District authorized to perform duties as described in these Rules and Regulations.

2.102 Tap

A "Tap" is the joining of a Water or Wastewater Service to the Water or Wastewater System, respectively, or a Private Service Main.

2.103 Impact Fee

"Impact Fee" is the payment to the District for recovery of capital investments associated with major components of the Water System and/or Wastewater System. The Impact Fee assessment is based on the particular impact of the use being connected. As used in these Rules and Regulations, “Impact Fee” may also include the Water System Impact Fee payable to the Upper Eagle Regional Water Authority, , if applicable. Refer to Appendix A, Schedule of Fees and Rates.

2.104 Temporary Water Service

“Temporary Water Service” is Water Service to a property prior to the payment of Impact Fees by a Customer. Refer to Article IV, Temporary Water Service. Impact fees must be paid prior to turning on permanent water service.

2.105 Tie-in

Refers to the physical act of connecting a main line extension to the existing system.

2.106 Tiered Rate Structure

A "Tiered Rate Structure” is a water use billing structure for Water Service whereby the monthly billing rate charged per thousand gallons of metered usage becomes progressively more expensive as more water is used. Both the District and Authority employ a five-tiered conservation-oriented rate structure to communicate the value of water to customers through pricing. The tiers are defined as follows:

- Tier 1 – Efficient Indoor Use: A usage tier that is intended to accommodate the expected volume of water needed for efficient indoor water use.

- Tier 2 – Efficient Irrigation Use: A usage tier intended to accommodate the expected volume of water needed for efficient outdoor water use.

- Tier 3 – Excessive Use: A usage tier intended to apply to excessive outdoor water use and whose higher billing rate discourages significant use in this tier due to the potential for water waste.

- Tiers 4 & 5 – Unsustainable Use: Water usage tiers intended to apply to outdoor water use and whose increased billing rate strongly discourages significant or frequent water use in these tiers due to wastefulness and the unsustainable

impact to our environment and infrastructure including water resource capacity, reservoir capacity, water treatment and distribution system capacity, aquifer capacity, and the aquatic health and ecological health of our local streams and rivers that provide our source water.

The Tiered Rate Structure is intended to communicate general guidelines for a customers' efficient use of water. For residential customers who are individually metered (one ~~one~~ meter per ~~/account per~~ dwelling unit), all customers pay the same rate for the same volume of water used. For multi-family, municipal ~~commercial~~, mixed-use, and commercial accounts, the amount of water in each tier is determined by multiplying the base tier volume by the accounts' SFE multiplier.~~. and establishes a water use amount in each tier based upon a customers' SFE multiplier.~~ In certain subdivisions and Planned Unit Developments, the tiers may not accurately reflect the area specific outdoor water use limitations set forth in applicable agreements, land use standards, land use permits, and/or water rights decrees including but not limited to Planned Unit Development Guides, Land Use and Development Codes, Design Standards, Plans for Augmentation, and Water Service Agreements (Land Use Limitation). In such instances, the governing document with the most restrictive limitation on outdoor water use shall define Efficient Irrigation Use amounts, if less than what would otherwise be allowed by the Tiered Rate Structure. Any amount of water used in excess of the Land Use Limitation shall be considered excessive and/or unsustainable, regardless of which billing tier the use falls within, and may be subject to further enforcement under applicable remedies.~~The Tiered Rate Structure is intended to communicate general guidelines for a customers' efficient utilization of water and establishes a water use amount in each tier based upon a customers' SFE multiplier. In certain subdivisions and Planned Unit Developments, the tiers may not accurately reflect the area specific outdoor water use limitations set forth in applicable agreements, land use standards, land use permits, and/or water rights decrees including but not limited to Planned Unit Development Guides, Land Use and Development Codes, Design Standards, Plans for Augmentation, and Water Service Agreements (Land Use Limitation). In such instances, the governing document with the most restrictive limitation on outdoor water use shall define Efficient Irrigation Use amounts, if less than what would otherwise be allowed by the Tiered Rate Structure. Any amount of water used in excess of the Land Use Limitation shall be considered excessive and/or unsustainable, regardless of which billing tier the use falls within, and may be subject to further enforcement under applicable remedies.~~

2.107 Turn-On and Turn-Off

The terms “Turn-On” and “Turn-Off” shall mean the manual turning of a Water Service valve to either allow water from the Water System to flow freely through the Water Service for the use documented in the New Account Application (Turn-On) or to preclude the free flow of water through the Water Service (Turn-Off). These terms do not apply to temporary water service as provided in Article IV, Temporary Water Service.

2.108 Unauthorized Use

“Unauthorized Use” of the District’s Water or Wastewater System by a Customer includes but is not limited to: a change or addition to a Customer’s equipment, service, use or property not stated on the Customer’s New Account Application that increases the Customer’s impact to the Water or Wastewater System; unauthorized Turn-On or Turn-Off of a Water Service or operation of a Water Main to accomplish the same; use of the Customer’s service that negatively impacts the District’s Water or Wastewater Systems such as backflow to the Water System; discharge of unauthorized materials or Inflow of rainwater or infiltration of groundwater to the Wastewater System; or unmetered water use. Refer to Article IV, Unauthorized Use.

2.109 ~~Usage Rate~~ Water Use Rate

The “Water Use Rate~~Usage~~ Rate” is a billing rate, specific to a Customer’s metered use from the Water or Wastewater System, that when applied to the Customer’s metered use, results in a portion of the Charge due from the Customer to the District.

2.110 User or Industrial User

A “User” or “Industrial User” is a source of Indirect Discharge.

2.111 Vacuum

A Vacuum Breaker consisting of an air inlet opening and a non-loaded floating check disk valve designed to prevent Back Siphonage only. The device shall not be subjected to continuous static line pressure or backpressure or be installed where it would be under pressure for more than 12 continuous hours.

2.112 Vacuum Breaker, Pressure Type

A Vacuum Breaker, designed to prevent Back Siphonage only, consisting of a spring-loaded Check Valve, a spring-loaded air inlet opening, a tightly closing shut off valve on each side of the device and two (2) appropriately located test cocks. The device shall not be subjected to backpressure. The entire assembly shall be an Approved Backflow Prevention Device.

2.116 Wastewater Service Line

A "Wastewater Service Line" or ~~"Service~~ Line~~" is~~ any pipe or conduit used to provide Wastewater Service from the place where the wastewater is generated to the Wastewater Collection System, including all appurtenant fittings and bedding materials. Maintenance, repair or replacement of the Wastewater Service Line is the sole responsibility of the Applicant or Customer.

2.117 Wastewater Treatment Plant

"Wastewater Treatment Plant" refers to that portion of the Sewer System which is designed to provide treatment of municipal sewage and industrial waste.

2.118 Wastewater System

"Wastewater System" is any network of wastewater collection or interceptor mains, wastewater treatment facilities, appurtenances, accessories, or portion thereof, owned and maintained by the District.

2.119 Water Main

"Water Main" or "Main" is any distribution or transmission pipe used as a conduit for water, connected to the District's Water System and owned and maintained by the District.

2.120 Water Meter

"Water Meter" is a measuring device installed on a Water Service. The Water Meter includes the meter and all the appurtenances necessary to connect it to the Water Service.

2.121 Water Service Line

"Water Service Line" ~~or "Service"~~ means any pipe or conduit and related fittings used to convey water to a place of use from a Water Main whether the pipe or conduit is connected to provide service or not; the Connection to the Water Main; and the bedding materials of the pipe or conduit; curb stop, shut off valves; pressure reducing valves; meters; and backflow prevention devices or assemblies located between the Water Main and the shut off valve installed on the downstream side of the Bb~~b~~ackflow Pp~~p~~revention assembly~~device~~. Maintenance, repair or replacement of the Water Service Line is the sole responsibility of the Applicant or Customer. As it relates to backflow surveys, per Colorado Department of Public Health and Environment guidelines, Backflow Prevention Cross Connection Control Regulation 11.39, Policy 7, Definition of Single Dwelling means supplied by a separate ~~-~~service line.

ARTICLE III - OWNERSHIP AND LIABILITY

3.1 Liability of District

The District is subject to and avails itself of the provisions contained within the Colorado Governmental Immunity Act, which provisions cannot be waived in whole or in part without the express approval of the District's Board of Directors.

3.2 Compliance with Industrial Pretreatment Requirements

The District has the authority to require all Customers to comply with the Pollutant Discharge Regulations and the Industrial Pretreatment Program and any other applicable law, to require compliance with pretreatment standards; to require monitoring and reporting; to issue notices of violation, compliance orders, cease and desist orders, and, emergency suspensions; to assess a System Tampering fine; to recover costs in accordance with Article III, Violator's Liability and Appendix F; and to seek judicial remedies for any uses as allowed under the Pollutant Discharge Regulations and Industrial Pretreatment Program. The Pollutant Discharge Regulations and Industrial Pretreatment Program are incorporated and adopted as Appendix ~~E~~F of these Rules and Regulations.

3.3 Ownership of Facilities

All existing mains and treatment works connected with and forming an integral part of the Water and Wastewater System are the property of the District, unless a specific legal contract with a Customer provides otherwise or the District declined to accept, or has not yet accepted, the Main or treatment works for ownership. Private ownership remains valid regardless of whether the District operates, maintains, finances, or constructs all or a portion of the facilities owned by private parties. Transfer of ownership of the Main and treatment works to the District shall be in accordance with the requirements set forth in these Rules and Regulations.

In order to protect the Public Water System, private water service mains must be isolated from the system via an approved B~~b~~ackflow P~~p~~revention Assembly~~device~~ and metered via a master meter. The properties connecting to such private service mains for service are responsible for operation, maintenance and repairs. Generally, private service mains are discouraged.

3.4 Water Service

A Water Service Line is owned and maintained by the District from the Tap on the District Water Main up to the property line, edge of easement, or curb stop valve, whichever is closer to the Water Main. The Customer owns and is responsible for the maintenance of the curb stop valve and the remaining portion of the Water Service Line serving the property. If the Water Service Line is tapped to a p~~P~~rivate m~~M~~ain, the Customer shall own and maintain the Water Service Line from the Tap on the Water

provisions as expansion of use discovered by the District and the Customer shall then be subject to the provisions of Article IV, Additional Assessment of Fees. Any Unauthorized Use, once discovered, shall be paid for at the same rate as if that use had been authorized.

4.5.19 Fire Suppression Systems

If a fire suppression system is to be used, a plan of the fire suppression system approved by the appropriate fire protection authority is to be submitted to the District with the New Account Application. The fire suppression service and domestic water service shall be designed as required by the local fire authority. All fire suppression systems shall meet National Fire Protection Association (NFPA) requirements and additionally shall meet the requirements of all applicable municipal, county, and state building and fire protection codes. All fire suppression systems shall be protected from fluctuating Water Main pressures by a pressure-reducing valve.

As dictated by the State of Colorado, all fire suppression systems shall be equipped with a backflow prevention assembly~~device~~ appropriate to the degree of hazard present on the site. Refer to Appendix G, Backflow Prevention and Cross Connection Control Program.

4.5.20 Landscape Irrigation Accounts

Landscape Irrigation Accounts are specific to outdoor water use metered separately from indoor use on the premises. Irrigation water use for single family and duplex residential developments is usually combined with the Customer's total water use at the property and the connection shall be made downstream of the meter and backflow prevention assembly, unless a separate meter is requested to meter landscape irrigation at the property. All other uses require separate meters for irrigation (outdoor) and domestic (indoor) use, utilizing one connection to the water main. There are two types of ~~Landscape~~ Irrigation Accounts:

(a) ***Outdoor use connected from a structure:*** ~~***Landscape Sprinkler Account***~~ ~~– is for outdoor metered water use associated with a structure.~~ The District, upon approval of a New Account Application, will authorize a Water Service Connection without payment of a separate Impact Fee for an irrigation only account connected to a structure ~~for the Landscape Sprinkler Account.~~ All other Connection Fees and rates for the associated structure, however, must be paid, and requirements met prior to authorization of the Connection for the Landscape Sprinkler Account. For Landscape Sprinkler Accounts, the Impact Fee is paid as part of Impact Fees paid for the related structures. Water service and water use for the Irrigation Account are subject to irrigation Service Charges and Water Use Rates, See Appendix A Schedule of Fees and Rates.

(b) ***Outdoor use not connected to a structure: ~~Irrigation Account~~*** ~~–~~ ~~is for~~ O~~o~~utdoor metered water use from a stand-alone irrigation system, not associated with a structure. The District, upon approval of a New Account Application, will authorize a Water Service Connection for the ~~Irrigation~~ a~~A~~ccount. All other requirements shall be met prior to authorization of the Connection for the Irrigation Account. Water service and water use ~~usage~~ for the Irrigation Account are~~is, however,~~ subject to ~~the~~ Irrigation Service Charges and Water Us~~ag~~e Rate~~s~~. See Appendix A Schedule of Fees and Rates.

4.5.21 Winter Connection

During the winter months (October 15 to April 15), Connections will be made at the District's sole discretion. The Connection location shall be heated or otherwise protected from freezing.

5.6 ~~Base~~ Service Charge, Debt Service Charge, and Us~~eage~~ Rates

~~Base~~ Service Charge and Debt Service Charge for Water and Wastewater Services is billed monthly, in areas~~rears~~, from the date of the prior month's meter read to the date of the current month's meter read, and are calculated by applying the SFE multiplier to the applicable ~~Base~~ Service Charge and Debt Service Charge~~Rates to the SFE multiplier~~ associated with the Customer account.
For Water Service, the monthly Use ~~C~~Charge is calculated by applying the Usage Rate to the volume~~amount~~ of water used in each tier. In an effort to encourage efficient water use, the District employs a Tiered Rate Structure whereby the ~~Usage~~ Use Rate increases as more water is used. ~~The water usage allowance per Tier increases for a property per the SFE multiplier associated with the Customer account.~~ See Appendix A for the volume of water in each tier.

For Wastewater Service, the monthly c~~C~~harge is ~~during the winter months (the January through April billing periods) is calculated by applying the wastewater Usage Rate to the amount of water used. The monthly wastewater Charge for the remaining eight monthly billing periods of the year~~ calculated by applying the~~-~~ wastewater r~~R~~ate to the average ~~amount~~ volume of water that was used per month during the winter months (January through April) billing periods, the minimum charge is based on~~equal to~~ 5,000 gallons of use per month.

The ~~monthly Charge calculated by~~ Service Charge, Debt Service Charge~~Rate~~ and Us~~e~~age Rate are applied ~~is initiated~~ when the Water Meter is set and Water Service is turned on to the Customer's property~~. by District personnel.~~

5.7 Charges Related to Turn-On and Turn-Off of Service

The Monthly Service Charge and ~~calculated by Base Service Rate and~~ Debt Service Charge ~~Rate~~ do not cease when a water Turn-Off occurs. Payment of all charges due to the District is required in full prior to Turn-On of Water Service. Where Turn Off of Water Service is the result of nonpayment of charges or non-compliance with these Rules and Regulations, a fee will be charged to the Customer for the Turn-On and Turn-Off of service.

5.8 Billing Errors

If the Customer believes the billing statement is in error, the Customer must file, in writing, a notice to the District of the presumed error, and request a review of the billing statement by the District. However, such notice by the Customer shall not constitute sufficient reason for withholding payment of fees due. Upon review by the District, and any revision of the billing statement, any additional fees due from the Customer shall be paid no later than thirty (30) days from the date of the revised billing statement. Any refund due to the Customer will be credited on a subsequent monthly billing statement.

5.9 Fees for Unauthorized Use

Any Unauthorized Use shall be paid for at the same rate as if that use had been authorized. Unauthorized Use or Connection will be subject to Article IV, Additional Assessment of Fees and Article III, Violator's Liability.

5.10 Fee for Non-Compliance

If a Customer's service or water use is determined by the District to be not in compliance with these Rules and Regulations, the Customer may be subject to the provisions of Article III, Violator's Liability and/or may be charged a monthly non-compliance fee until the non-complying condition is remedied. Refer to Appendix A, Schedule of Fees and Rates.

5.11 Collections on Delinquent Accounts

5.11.1 District Notices and Actions

After ~~thirty (30)~~twenty-five (25) days of non-payment of fees assessed to a Customer account, the District shall assess ~~an interest~~a Finance Charge at the maximum rate allowed by statute on the unpaid balance. At this time, the account will also be declared delinquent~~. and a delinquent notice will be mailed to the Customer.~~ If fees remain unpaid fifteen (15) days after the ~~delinquent notice is mailed~~Finance Charge is assessed, a Delinquent Notice is mailed~~, a notice of disconnection "door hanger" shall be posted at the property~~.If the fees remain unpaid for an additional ten (10) days a Notice of Disconnection "door hanger" shall be posted at the property. If payment is not received within 24 hours from posting this notice, the District shall have the right, in its sole discretion, to discontinue service. If service is discontinued, a Turn-Off fee will be added to the amount due. The District will also assess costs related to collection of any delinquent fees, including legal, court, third party, filing or other incidental costs, to the Customer. Until paid, all such delinquent fees shall constitute a perpetual lien on the property served.

5.11.2 Certification of Amounts to County Treasurer

In addition to any other means provided by law, the District may elect, by resolution, at a public meeting held after receipt of notice by the affected parties, including the property owner, to have certain delinquent fees, rates, tolls, penalties, charges, or assessments made or levied solely for Water, Wastewater, or Water and Wastewater Services (including fees for availability of such service and Connection fees), certified to the Eagle County Treasurer to be collected and paid over by the Treasurer in the same manner as taxes are authorized to be collected and paid over pursuant to section 39-10-107, C.R.S.

6.9.9 Maintaining Fire Hydrant Clearances

Fire Hydrants must be able to be operated at all times. No landscaping, retaining walls, structures, or other obstructions may block access to fire hydrants or bring a fire hydrant out of compliance with these Rules and Regulations. The property owner is responsible for maintaining the following clearances around fire hydrants located on or adjacent to their property: ten (10) feet in the front, seven (7) feet on the sides, and four (4) feet in the back. If the required clearances are not met, ERWSD personnel will remove such obstructions after seven (7) days written notice is given or immediately in cases of emergency, the costs of which may be added as a charge to the property owner's monthly bill. The health, safety, and welfare of the public and the critical emergency service nature of fire hydrants require that clearances be maintained at all times. Refer to Appendix C, Standards Details for Water Mains, Fire Hydrant Assembly, for a diagram of the proper clearances.

6.9.10 Construction Water / Fire Hydrant Meter Assemblies

Construction Water – Construction water for use on private property shall be taken only through an authorized Water Service Connection and shall be metered. Such water use shall conform to the provisions of Article IV, Temporary Water Service.

Fire Hydrant Meter Assemblies – The use of a fire hydrant meter assembly is permitted only with the written authorization of the District. A fire hydrant meter assembly includes the meter, backflow preventer, shut-off valves and related fittings. Fire hydrant meter assembly use is allowed only between April 15 and October 15 of each year. No enclosures shall be permitted. The Customer shall protect the fire hydrant meter assembly from freezing. The Customer is responsible for any damage, including vandalism and freezing, to fire hydrants and/or hydrant meters. Only District personnel are permitted to install, move, or disconnect hydrant meters. Customers who attempt to install, move, or disconnect a hydrant meter without District authorization shall be subject to the provisions of Article III, Violator's Liability. Refer to Appendix A, Schedule of Fees and Rates for deposits, rates and fees related to fire hydrant meter assemblies.

6.9.11 Efficient and Beneficial Water Use

Because water is a limited resource, all Customers of the District shall use water efficiently and only for beneficial purposes in order that the District can continue to assure an adequate water supply to protect the public health, safety and welfare. Customers using water from a source other than the District's Water System for outdoor uses such as landscape watering are encouraged to follow these requirements for Efficient and Beneficial Water Use.

6.9.12 No Wasteful Water Use

Water shall be used only for beneficial purposes and shall not be wasted. Any instance of flagrant runoff or other waste of water shall be considered a violation of these Rules and Regulations.

6.9.13 Irrigation and Outdoor Use Regulations-General

Water for irrigation of lawns, landscaping and other outdoor uses (e.g., car washing, outdoor wash-downs, etc.) shall be used pursuant to these Rules and Regulations. Nothing herein shall prevent the imposition of a total ban on outdoor water use in the event of a water supply emergency, or the creation of additional regulations to meet specific Water System or water supply conditions.

(a) Irrigation or other outdoor uses of water shall occur before 8:00 a.m. or after 6:00 p.m.

(b) Customers with even-numbered addresses may use water for irrigation and other outdoor uses on Sundays, Wednesdays, and Fridays.

(c) Customers with odd-numbered addresses may use water for irrigation and other outdoor uses on Tuesdays, Thursdays, and Saturdays.

(d) No irrigation or other outdoor water uses are permitted on Mondays.

(e) No irrigation or other outdoor water use shall be permitted at any time through a free-running hose without a nozzle or sprinkler attached.

6.9.14 Irrigation Permits THIS PROGRAM HAS BEEN SUSPENDED UNTIL FURTHER NOTICE

~~Irrigation Permits are required and are available from the District that allows consecutive-day irrigation for specific needs. Such needs are limited to circumstances under which a Customer needs to apply water more frequently than allowed by these regulations and restrictions to establish new landscape plantings. Requests shall be made at least two (2) business days before the permit is needed. However, no irrigation use shall occur between the hours of 8:00 a.m. and 6:00 p.m. and irrigation is not allowed on Mondays. Irrigation Permits may be requested for the following specific needs:~~

~~(a) For newly planted sod and/or newly-planted trees and gardens, irrigation may occur each day for a period not exceeding 14 consecutive days (excluding Mondays), or for watering newly-seeded lawns each day for a period not exceeding 28 consecutive days (excluding Mondays).~~

~~(b) For daily watering of outdoor stock at nurseries, greenhouses, and stores.~~

~~Violation of the terms of an Irrigation Permit will be cause for immediate revocation of the permit. The District shall have authority to interpret, apply, and enforce these Rules and Regulations to prevent undue commercial or business hardship, and may issue other Irrigation Permits in furtherance of this authority.~~

6.9.15 Use Restrictions – Water Supply Emergencies

If conditions of the Water System or the water supply so limit the availability of water that normal water use may endanger the adequacy of the water supply, the District may declare a water supply emergency and implement emergency water use restrictions and such additional regulations and restrictions that are reasonably necessary to conserve and protect the water supply and to insure an uninterrupted flow of water through the system. Such emergency water use regulations and restrictions shall remain in force and effect until the District determines that the conditions requiring their imposition no longer exist. Compliance with emergency water use restrictions is a requirement of these Rules & Regulations.

Emergency conditions include but are not limited to: low river flows; impairment of water supply quantity and/or quality; Water Main break; loss of electrical power or pump outages; or loss of system pressure. The District may use local radio and television broadcasts, emergency notification systems, and local signage, as appropriate, to notify the public of such water supply emergency conditions and the necessary water use restrictions.

6.9.16 Filling of Swimming Pools

An Air Gap must be maintained between the swimming pool and the Water System at all times. Swimming pools will be limited to one filling per year unless draining for repair is necessary. The Customer shall notify the District by telephone two (2) business days prior to the filling of a swimming pool.

6.9.17 Water Features

Outdoor, private water features, such as but not limited to, fountains, waterfalls, and artificial ponds are prohibited in new construction and redevelopment. Pre-existing water features, which exist as of February 25, 2021, shall be entitled to continue to operate. However, modification, enlargement, or substantial improvement of the water feature will not be allowed and any excessive use of water associated with the property or metered account may trigger the need to remove said water feature. Water features are not allowed to be placed in easements.

6.10 Use of Wastewater System

- The Customer may drain to their wastewater service line; this includes drains in the home/business or the private property sewer cleanout. The Customer shall not open or drain directly to a District manhole.
- The chlorine or bromine levels must be below 0.1 mg/L.
- The pH of the discharge water must be between 6.5 and 8.5.
- The discharge water must be free of any unusual coloration.
- Settled material should not be discharged with pool or hot tub water.
- The drainage rate must be controlled to less than 100 gallons per minute.

If it is not possible to drain the pool or hot tub to the collection system, it is recommended that the Customer follow the currently adopted version of the Colorado Department of Health and Environment's (CDPHE) Low Risk Discharge Guidance – Discharges from Pools, Fountains and Other Similar Type Facilities.

6.10.5 Grease Interceptor

Grease interceptors, also known as grease traps, are required to be installed and maintained in proper working order for all restaurants, bakeries or food and beverage preparation establishments from which wastewater discharges containing oil or grease could be made. Grease interceptors shall be cleaned of collected materials (fats, oils and grease) by the Customer on a regular basis to ensure effective operation. The District has the authority to inspect grease interceptors and to request and review operating records at any reasonable time to ensure that proper maintenance is being performed. The addition of chemicals and biological additives to grease interceptors used for dissolving grease are prohibited.

If at any time the District determines that the wastewater contains grease or grease dissolving chemicals having an adverse effect on the Wastewater System, the Customer will be notified and required to perform remedial maintenance and cleaning immediately. See Appendix F for program requirements.

If no grease interceptor is in place or an existing grease interceptor is not operable, a new grease interceptor shall be installed by the Customer. At a minimum, the most recently adopted State of Colorado Plumbing Code shall be met regarding the installation and sizing of a grease interceptor.

Failure to comply with the provisions of this section shall result in a Charge or the suspension of water service as defined in Article III, Violators Liability.

6.10.6 Control Manhole

When required by the District, any Customer served by a Wastewater Service carrying an Indirect Discharge shall have and maintain, at the Customer's expense, a suitable control manhole on the Wastewater Service to facilitate observation, sampling, and measurement of the wastewater by the District. A control manhole on the Wastewater Service for monitoring wastewater is required for all restaurants and bakeries. All

ARTICLE VIII – DEVELOPMENT APPROVAL PROCESS

8.1 General

All inquiries, applications and plan submittals for development within the District's service area shall be initiated online at:

~~**http://www.erwsd.org/connection-application-form**~~
https://erwsd.centricityweb.com/

Review of applications and submittals are conducted by the District's Construction Review Team (CRT). To schedule an appointment, contact:

The Construction Review Team
CRT@erwsd.org

An Applicant or Applicant Representative may request a meeting at any time during the Applicant's project planning period to seek clarification of submittal requirements of the Applicant.

Applicants proposing to receive service for new or expanded water uses and/or new wastewater discharges (not previously approved by the District), must complete the Development Approval Process in order to receive service from the District's water and/or wastewater systems. New and expanded service generally also requires a land use application through a Land Use Authority (LUA). The District works with local LUAs to coordinate its approvals with the LUAs approval process.

The District's Development Approval Process is described below and includes:

- Initiation of Development Approval Process
- Inclusion into Service Area (if applicable)
- Water Rights Dedication Analysis
- System Capacity evaluation
- Treated Water Storage Dedication Analysis
- ~~Ability to Serve or~~ Conditional Capacity to Serve Letter Issued
- Completion of Water Rights Dedication Process
- Ability to Serve Letter Issued
- Infrastructure Acceptance Procedure, refer to Article IX.

8.2 Initiation of Development Approval Process

The Development Approval Process is initiated by an Applicant or Applicant Representative upon submission of a conceptual plan showing the location of the ~~Work and area to be developed and any adjoining~~ proposed development to the Construction Review Team (CRT) for review and the payment of applicable application fees. Submission requirements include the following:

(a) Legal Description of Property

(b) Vicinity Map of development

(c) Description of land use (current and proposed), including:
  i. number of dwelling units (with square footage)
  ii. commercial and mixed uses if applicable (with square footages)
  iii. current and proposed zoning
  ~~iii.~~iv. total acreage of irrigated areas

8.3 Inclusion into Eagle River Water and Sanitation District or the Service Area of the Upper Eagle Regional Water Authority

Refer to Article IV.

8.4 Water Rights Dedication Analysis

Applicants proposing new development, re-development or change of use of existing development may be required to dedicate water rights sufficient to serve the proposed uses. All District policies regarding water rights dedication must be followed. Refer to Article X, Water Rights Dedication Requirements.

Water rights dedication sufficient to serve the water uses of the proposed development or a cash payment in lieu of a water rights dedication at the Board of Directors' discretion must be made by the Applicant to obtain service. To determine whether a dedication is required, a proposed dedication is adequate, or a cash-in-lieu payment is acceptable to the Board of Directors, the Applicant shall pay the applicable application fee and ~~shall~~ submit the following to the District:

(a) Completed Water Demand Worksheet (available upon request from ERWSD)

(b) A request for cash-in-lieu of water rights dedication or ~~payment or description of~~information regarding potential ~~the~~ water rights to be dedicated including all applicable water court decrees

(c) Water Rights Evaluation deposit applied to all costs incurred by the District for third party review of the information by a water rights engineer and water attorney. For complex reviews, additional review fees may be required. Refer to Appendix A, Schedule of Fees and Rates.

The Board of Directors approves/denies the application for water rights dedication or cash in lieu payment. Resolution is defined as either:

(a) A determination that no water rights dedication is required~~.~~;

(b) An executed Water Rights Dedication ~~ or Water and Wastewater Services~~ Agreement is in place; or

(c) A Water and Wastewater Service Agreement has been executed, ~~T~~the Board of Directors has accepted cash-in-lieu of water rights dedication payment, and the Applicant has paid all fees in full.

8.5 Determination of Sufficient System Capacity

Evaluation of the proposed water and wastewater infrastructure needed to serve the proposed development includes an analysis of the impacts the proposed development's water uses and wastewater demands will have on existing or future infrastructure of the District, treatment and ~~-~~system capacity, regulatory compliance, rates and water supplies. CRT and the District's consultants will determine system impacts. If deemed necessary, the CRT may require a ~~third party~~third-party review by its system modeling and engineering consultants to determine the effect of the proposed connection and demand on the District's existing infrastructure and treatment capacity. The Applicant may be required to up-grade/modify existing infrastructure to accommodate the proposed development and its impact to the water and wastewater infrastructure, at the Applicant's cost.

8.6 Determination of Treated Water Storage Dedication

An Applicant with property upon which new development or redevelopment is proposed, which is located within the District's service area, and which will require an increase in water use or new water use not allowed by existing Connections or zoning, is required to provide treated water storage adequate to meet the needs of the proposed development. This requirement may be fulfilled by funding the design and construction of a new storage facility (Major Facility) ~~in addition to~~or by funding existing storage capacity through payment of impact fees~~the WSIF~~ by the customers.

The amount of treated water storage required shall be equal to the combined volumes of water calculated to meet the need for equalization storage, emergency storage, and fire flow storage for the development. Equalization storage shall be equal to 25 percent of average daily demand (ADD); emergency storage equal to 100 percent of ADD; and fire flow storage based on the greatest fire flow required by the fire protection agency having jurisdiction in the service area of the proposed treated water storage reservoir. The CRT will work with the applicable fire protection agency to determine fire storage requirements using best practices. If a new~~additional~~ treated water storage facility is required, it will be implemented as a Major Facility.

If the proposed development is to be served by a new treated water storage facility, Applicant shall provide estimated size and capacity calculations, geotechnical information, and conceptual plans as part of the plan submittal.

8.7 ~~Ability to Serve Letter or~~ Conditional Capacity to Serve Letter

The Applicant may be required to obtain an Ability to Serve Letter from the District by a LUA or lending entity before the conditions to obtain an Ability to Serve Letter can be met. In this case, the District will issue a Conditional Capacity to Serve Letter to the Application which states that the District is willing and able to serve the development if all conditions for an Ability to Serve Letter are satisfied. These conditions may include but not be limited to the inclusion of the property into the service area of the District, obtaining all necessary land use approvals for the development, completion of the District's water rights dedication process, execution of a water and wastewater service agreement, construction of water and wastewater infrastructure necessary to serve the development, and the payment of all applicable fees. This letter does not commit the District to serve the development if the conditions to obtain an Ability to Serve Letter are not met.

Prior to the issuance of a Conditional Capacity to Serve Letter, the Applicant may be required to deposit funds to secure the conditional commitment of water rights to the proposed development in accordance with the District's water rights dedication policy. The Conditional Capacity to Serve Letter will include an expiration date and may be extended following a written request for extension by the Applicant and subject to approval by the Board of Directors.

8.8 Ability to Serve Letter

The District will issue an Ability to Serve Letter to the Applicant that satisfies the requirements of § 29-20-304 (3), C.R.S. once the following conditions are met: ~~as a condition of its application for a proposed development or a change in zoning with a LUA or other entity. The Applicant must meet the following conditions before an Ability to Serve Letter will be issued:~~

(a) ~~A Petition for Inclusion and processing fee has been submitted for the proposed development~~The property proposed for development has been included within the Eagle River Water and Sanitation District service area;~~or within the service area of the Upper Eagle Regional Water Authority~~.

(b) Resolution of all water rights dedication issues to the satisfaction of the District; and

~~(b)~~(c) ~~and identification of a~~All impacts of the proposed development to~~on~~ the Water or Wastewater Systems of the District have been identified and agreed upon between the Applicant and the District.

An Ability to Serve Letter may contain conditions that must be satisfied before the development can receive water service such as the construction of water and wastewater infrastructure and the payment of all applicable fees.~~and shall have an~~

~~effective period of one (1) year from the date of issuance of the letter unless other provisions are made between the District and the Applicant.~~

~~8.7.1 Conditional Capacity to Serve Letter~~

~~The LUA or a lending entity may request that the Applicant obtain an Ability to Serve Letter or otherwise commit to serve the development before the conditions to obtain an Ability to Serve Letter can be met. In this case the District will issue a Conditional Capacity to Serve Letter to the Applicant that states that the District is willing to serve the development if all conditions for an Ability to Serve Letter can be met. This letter does not commit the District to serve the development if the conditions are not met. The Conditional Capacity to Serve Letter will include an expiration date that may be extended following a written request for extension by the Applicant and subject to the approval by the Board of Directors.~~

ARTICLE IX – INFRASTRUCTURE ACCEPTANCE PROCESS

9.1 General

All water or wastewater mainline extensions, replacements, modifications, reconfigurations, expansions of capacity, or abandonments as a result of development within the District's service area shall be made at the expense of the Developer or Applicant. Prior to excavation, the Developer or Applicant shall locate, survey, pothole, and/or videotape at its expense, any existing water mainlines and facilities that may potentially be affected by construction activities. No work shall commence without the District's written Construction Plan Approval. Construction Plan Approval will not be granted without inclusion into all applicable District boundaries, issuance of an Ability to Serve letter or the determination that the letter is not required, resolution of all water rights dedication requirements, and payment of any required fees.

All inquiries, applications and plan submittals for water and wastewater Main extensions within the District's service area shall be initiated online at:

~~http://www.erwsd.org/connection-application-form~~
https://erwsd.centricityweb.com/

Review of applications and submittals are conducted by the District's Construction Review Team (CRT). The CRT meets at the District offices every Tuesday at 1:00 p.m. To make an appointment, contact:

~~Development Review Coordinator~~Plan Review Engineer
(970) 477-5451~~(970) 477– 5449~~
CRT@erwsd.org

An Applicant or Applicant Representative may request a meeting at any time during the Applicant's project planning period to seek clarification of District specifications, submittal requirements or the Infrastructure Acceptance Procedure. Submission of plans for District review must be made in person by the Applicant or Applicant's Representative at a regularly scheduled meeting of the CRT.

The District's Infrastructure Acceptance Procedure is described below and includes:

- Construction Plan Approval
- Construction Acceptance
- Final Acceptance

9.2 Construction Plan Approval

No Work may commence prior to Construction Plan Approval. The District will review all submittals for conformance with the District's Standard Specifications for Water and Wastewater Main Line Construction and other applicable Rules and Regulations and either approve the submittal or return it to the Applicant for clarification, modification or correction. The Applicant is responsible for compliance with the Districts' Standard Specifications for

Water and Wastewater Main Line Construction and with any site-specific special conditions that may be reasonably required. The Standard Specifications for Water and Wastewater Main Line Construction take precedence over any plan reviews performed by the District unless a written Variance has been granted. The District is not responsible for omissions that may occur during its plan review process.

9.2.1 Construction Plan Submittal Requirements

One (1) set of each submittal item ~~are~~is required electronically. The following submittals are required per CDPHE standards[1] unless deemed not applicable by the Construction Review Team (CRT):

(a) An overall or master plan showing the location of the Work, area to be developed and any adjoining proposed development by the Applicant:~~;~~

i. Prior to submitting any master plan, Applicants are required to meet with District staff to review the project concepts and obtain direction from the District.

ii. Provide a conceptual layout of proposed infrastructure. This shall include all dry and wet utilities.

iii. Prepare and submit a basis of design report signed and sealed by a professional engineer licensed in the State of Colorado that supports the design of the proposed layout of the infrastructure. Hydraulic modeling using industry standard software programs are required for water distribution and wastewater collection pipe design. Please consult the district prior to proceeding with your specific software choice. Modeling results must be provided with the basis of design report.

~~i.~~iv. The master plan must be accepted and approved by the District prior to submitting any construction drawings.

(b) Detailed and complete construction drawings of the Work including:

i. A plan view drawing of the proposed Water and Wastewater Systems;

ii. The proposed alignment and size of the Water and Wastewater mains. The proposed location, size, materials and details of all system attributes, including but not limited to: valves, fire hydrants, fittings, manholes, services, drop manholes, energy dissipation devices, bedding, backfill, final surface treatment, insulation and any connections from private lift stations, etc.;

iii. Water and Wastewater System profiles with storm sewer and utility crossings shown;

iv. Points of Connection to existing facilities;

v. Location and configuration of any existing or proposed property lines, rights-of-way, floodplain boundaries, easements, roads, driveways, structures, cut or fill slopes, guard rail, drainage features, other utilities, berms, landscaping, hardscape, street heating systems or topographic features, and

[1] Colorado Department of Public Health and Environment Design Criteria for Potable Water Systems and/or Design Criteria for Domestic Wastewater Treatment Works.

The Applicant will collaborate with the District to enter into an agreement for the design and construction of Major Facilities, or provision for the construction or upgrade of Major Facilities may be included in a Water Service Agreement or a Sewer Service Agreement between the District and the Applicant. The District shall provide all project management services for Major Facilities, including planning, design, and engineering of all Major Facilities; preparation of bid documents, preparation of construction cost estimates, bidding the project, awarding the contract, and managing construction to completion and throughout the warranty period. Developer shall be solely responsible for providing all of the funds necessary for planning, design, and construction of the Major Facility.

9.2.4.1 Regional Facilities

The District will not own, manage, or operate water and wastewater systems which are not designed as regional Facilities. Developments requesting to construct, finance, and utilize interim, non-regional facilities will be reviewed on a case-by-case basis. Such interim, non-regional water and wastewater systems may be permitted to operate within the District's service area at the discretion of the District Board of Directors subject to the following minimum criteria, and any other conditions that may be imposed by the Board:

- The non-regional water or wastewater systems are designed and constructed in accordance with the District's Rules and Regulations;
- The non-regional water or wastewater systems are designed in such a manner that they can be integrated into future regional systems capable of serving adjacent properties without additional cost to the District; and
- The non-regional water or wastewater systems utilize water resources efficiently.

9.2.5 Special Conditions

When applying for a main extension, special conditions that involve another agency, such as crossing a railroad or highway, may exist. All conditions of the appropriate agency must be satisfied. All applicable designs, drawings and/or calculations or special conditions required by other reviewing agencies or entities of the Applicant's project shall be incorporated into the Applicant's submittal to the District. The District is not responsible for ensuring compliance with the requirements of other reviewing agencies. Should a conflict arise between the requirements of another reviewing agency and the District's requirements the more stringent plans, requirements and/or specifications yielding a higher quality product, as determined in the sole discretion of the District, shall prevail.

9.2.6 Construction Plan Approval Letter

A Construction Plan Approval Letter grants the Applicant permission to commence the w~~W~~ork. A Construction Plan Approval Letter shall not be granted until:

(a) Inclusion of the property to be served in the Eagle River Water and Sanitation District, the service area of the Upper Eagle Regional Water Authority, or a service contract with the District or Authority is completed;

(b) Schedule a mandatory pre-construction meeting at the construction site a minimum of three (3) business days after the plans have been submitted. Participants shall include, but are not limited to: the Applicant; Applicant's contractor, excavator and engineer; and the District representative. Construction may begin once the meeting has concluded and the District Inspector has signed off. If a wastewater bypass ~~pumping~~ is required, a wastewater bypass ~~pumping~~ plan shall be submitted for approval by the District ~~Inspector~~. See Section 9.3.4 for details.

(c) Provide a complete Bill of Materials for all proposed water and wastewater infrastructure.

(d) Secure and pay for all licenses and permits required for the Work.

(e) Make adequate provisions for notification of customers, businesses and/or individuals who may be impacted (e.g., interruptions in service, traffic detours). The District shall be given two (2) business days' notice of any scheduled interruption of service and shall be notified immediately of any unscheduled interruptions of service. Work plans shall be designed to minimize interruptions. All affected customers, businesses and/or individuals shall be notified, in writing, at least two (2) business days in advance of construction, and again upon any scheduled interruption of service.

(f) Submit traffic control plans as approved by the appropriate governing agency.

(g) The District encourages all Applicants to videotape any potential areas that may be affected by approved Water or Wastewater Main construction prior to construction so as to avoid potential conflicts that may arise during or after construction.

(h) In the event that construction does not commence within twelve (12) months of the approval date, the plans must be resubmitted for review and approval. If construction on the main installation is halted for more than twelve (12) months, plans must be resubmitted for review and approval prior to commencement. Resubmitted plans must adhere to the most recently updated specifications.

9.3.1 Construction Site Safety Provisions

The safety of the public, Applicant's workers, District personnel and/or others who may be on the job site is the responsibility of the Applicant. At a minimum, safety requirements shall conform to the requirements of the Occupational Safety and Health Act (OSH Act). Failure to provide safe access to an excavation may result in rejection of the work if it cannot be safely inspected. Refer to Appendix C Standard Specifications for Water Mains and Appendix D, Standard Specifications for Wastewater Mains.

9.3.2 Inspection

9.3.4 Bypass System Requirements

When Construction requires the shutdown of an existing Wastewater Main, a bypass system shall be required to ensure the uninterrupted operation of the Wastewater System. A bypass system can include the use of pumps with piping or hauling or gravity piping. The Contractor shall be responsible for submitting a Wastewater Flow Management Plan (WWFMP) to the District for review and approval a minimum of thirty (30) days prior to construction of the bypass. The Contractor shall have a copy of the approved WWFMP on the construction site at all times and shall provide a copy to the District Inspector. See Appendix D for the WWFMP requirements.

The Contractor shall be responsible for protecting the bypass system throughout the duration of the Project and the Contractor shall be responsible for any damage caused by their failure to provide adequate protection to the bypass system. A bypass system shall be attended at all times while operating.

The Contractor shall not cause or contribute to any incidence of overflows or spills of wastewater from the Wastewater System. To minimize the risk of an overflow or spill, the Contractor shall develop and submit to the District at least fifteen (15) working days prior to the start of construction at a site requiring flow management, a written Discharge Emergency Response Plan (DERP). See Appendix D DERP requirements.

9.4 Construction Acceptance

Construction Acceptance is the District's acceptance of completion of the Work. No Service Connections or use shall be made on the Water System or Wastewater System until a Construction Acceptance Letter has been issued by the District.

9.4.1 Construction Acceptance Submittal Requirements

Drawings of Record

Drawings of Record shall be based on the approved Construction Plans and shall be clouded to clearly depict the accurate, scaled, field-verified location of the water and wastewater systems and appurtenances as constructed in the field and shall clearly delineate between existing and new water and wastewater infrastructure.

Record drawings provided to the Eagle River Water and Sanitation District (ERWSD) or the Upper Eagle Regional Water Authority (UERWA) shall be tied to a horizontal coordinate system and a vertical datum. The horizontal coordinate system is NAD 1983 State Plane Colorado Central FIPS 0502 (US Feet). The vertical datum is North American Vertical Datum of 1988 (NAVD 88). Digital drawings like ACAD and GIS will be scaled with a Ground to Grid Scaling Factor; and this Scaling Factor must be described in the approved detailed construction and specifications plans.

Drawings of record shall be submitted in ACAD.DWG or ESRI GIS), and PDF format on standard 24" x 36" plan sheets signed and stamped by the Applicant's Registered Professional Engineer or Land Surveyor and clearly labeled "Drawings of Record."

The following are not considered Drawings of Record, and will not be accepted by the District:

(a) Construction Plans

(b) Free hand drawings or sketches

(c) Drawing measurements that are based upon Main or Service locates that occurred after the Main or Service lines were backfilled.

All as-built information shall be field surveyed under the direct care and supervision of a licensed Professional Land Surveyor. All adjacent rights-of-way, property boundaries, and easements shall be depicted based on field surveyed information and labeled with appropriate Eagle County recording information. Generally, drawings of record shall be submitted on a drawing scale of 1 inch = 20 feet; however, drawing scales up to 1 inch = 50 feet will be accepted for larger projects.

The Drawings of Record shall detail, at a minimum, the location of the following:

Water:

(a) New water mains ~~and services~~ with diameter, length, material, and insulation (if ~~aplicable~~applicable), ownership status (private or public) labeled.
~~(a)~~(b) New water services with tap location, diameter, length, material, and insulation (if applicable).
(c) New fittings ~~and thrust blocks~~ with fitting type, diameter, material, and X, Y, Z state plane coordinates labeled.
~~(b)~~(d) New thrust blocks with size shown.
~~(c)~~(e) New fire hydrants ~~size,~~ type, flange elevation, lateral invert elevation, extensions (if applicable), ownership status (private or public), and X, Y~~, Z~~ state plane coordinates labeled.
~~(d)~~(f) New valves, including curb stops, with sizes, type~~s~~ and X, Y, Z state plane coordinates labeled.
~~(e)~~(g) New vaults or other system appurtenances. Vault/manhole information, vault type, vault lid~~shall show the lid/access~~ X, Y, Z state plane coordinates and ~~orientation/~~extent of the below-grade structure.
~~(f)~~(h) Existing w~~W~~ater m~~M~~ain or s~~S~~ervice and/or abandoned m~~M~~ain or s~~S~~ervice shall be shown and labeled accordingly.
(i) Any other appropriate information shall also be included on the Drawings of Record to include insulation, cathodic protection, etc.
~~(g)~~(j) All utility crossings shall be labeled.

Wastewater:

(a) New w~~W~~astewater m~~M~~ain~~s or Service~~ with diameter, length, material, slope, secondary containment (if applicable),~~and~~ insulation (if applicable) ~~labeled~~, and ownership status (private or public) labeled.

(b) New wastewater services with tap location, diameter, material, length, insulation (if applicable), X, Y, Z state plane coordinates of stub out distal end and X,Y state planes coordinate of cleanouts labeled.

~~(a)~~(c) New manholes with diameter, type, inverts, rim elevations and ~~X, Y, Z state plane coordinates labeled. The orientation of the~~X,Y state planes coordinates of the manhole lid labeled~~to the eccentric cone section/base shall also be detailed~~.

~~(b) New Wastewater Service with tap location, diameter, material, length, and X, Y, Z state plane coordinates of stub out and cleanouts.~~

(d) New fats, oil, and gas infrastructure labeled to include grease interceptor size, grease interceptor X,Y state plane coordinates, inspection pit rim elevations, inspection pit invert elevations, and service lines with diameter, length, material and cleanouts labeled.

(e) All appurtenant details or shop drawings shall be included in the drawings of record. Other utility and storm water crossings, if applicable, shall be clearly depicted on the drawings.

~~(c)~~(f) All utility crossings shall be labeled.

Abandonment of existing Water and/or Wastewater System infrastructure shall be designated on the Drawings of Record as greyed out, and shall be labeled as abandoned with the date of abandonment and pipe material. Details shall be included where abandoned Mains or Services are within a 20-foot radius of any Water System valves.

Upon submittal of the Drawings of Record, the Applicant's Registered Professional Engineer or Land Surveyor shall certify in writing that the Water and/or Wastewater Systems were constructed in accordance with the construction drawings and specifications approved by the District.

Easement Documents

The Applicant shall demonstrate that the Water and Wastewater System Infrastructure is located within exclusive easements. Easements recorded with the final plat of the development shall be provided, with specific recording information, on the Drawings of Record submission. If additional easements are required, the Applicant shall submit a completed District Water or Wastewater Easement Deed request form with the Drawings of Record submittal, along with an easement exhibit, stamped and signed by a registered professional land surveyor. Easement documentation shall demonstrate that the constructed Water or Wastewater Main has been field verified to be within and generally centered in, the proposed or platted easement, and that the proposed easement meets the minimum requirements set forth in Appendix C Standard Specifications for Water Mains and Appendix D, Standard Specifications for Wastewater Mains.

Project Cost

A schedule of values to construct and/or install all Work shall be submitted. This shall include all engineering, labor, and material costs.

Bill of Sale

The District's standard Water or Wastewater Main Bill of Sale form shall be completed, notarized, and submitted to the District. An exhibit showing the Water or Wastewater Main

The Construction Acceptance Letter will be issued once all required submissions have been approved by the Construction Review Team~~Regulations Administrator~~. The date of issuance of the letter is the start of the Warranty Period.

To apply for Connection, contact the District office:

Customer Service Department
846 Forest Road
Vail, CO 81657
(970) 477-5451

Water Service Connections
Once the Water Main has been constructed per the approved construction plans, Construction Acceptance has been granted by the District, and all applicable fees have been paid, the Applicant may connect to the Water System.

Please refer to Appendix B.

9.5 Final Acceptance

Final Acceptance of the Work is the District's acceptance of ownership of the Work and inclusion of the Water or Wastewater Main into the District's system for service to Customers, system operations and maintenance and shall be the end of the Applicant's Warranty Period.

9.5.1 Final Acceptance Submittal Requirements

Final Grading and Paving Inspection
The Applicant shall request a final grading and paving inspection by the District Inspector. The Water or Wastewater Main and any roadways, driveways, drainage and utilities that are a part of the Applicant's project shall be fully operational at the time of inspection. The District will complete final grade and paving inspection within ten (10) days of notification by the Applicant. The Applicant or Applicant Representative must be present during the inspection.

Television Inspection
Upon request by the Applicant for Final Acceptance, the District will televise the Wastewater Main at its cost. The purpose of this inspection is to determine if the Main continues to meet District standards and is free from defects, failure, debris and/or blockages. If the inspection reveals any defects, failures or debris, the Applicant shall correct, modify or remove the specific problem to the satisfaction of the District. The cost of this corrective action will be borne by the Applicant. Once necessary corrective actions have been completed, the District will re-televise the Wastewater Main segment at the Applicant's expense.

Final Inspection
After all construction is complete, including final grading and paving, and the warranty period has reached its 22nd month, a final inspection will be performed on the work.

11.4 Dry Year Response

The goal of a Dry Year Response is to forestall an instream flow call and preserve reservoir storage. During such a Response, the Eagle River Water and Sanitation District and Upper Eagle Regional Water Authority will work to obtain a voluntary reduction in water use by all customers. The normal Water Use Regulations will be enforced. Additionally, enforcement will focus on eliminating unsustainable water use by customers using water in billing tiers 4 and 5.

Dry Year Response Restrictions

During this Response, the following restrictions on water use will be implemented:

- Water usage will be limited to use in Tier 3 or less.
- ~~Special irrigation permits may be limited.~~

Violations

Any customer who violates Dry Year Response Restrictions will be subject to penalties associated with violations of the normal Water Use Regulations, in addition to any other fees, fines, or penalties authorized by these Rules and Regulations:

- 1st Offense: Warning letter and/or email
- 2nd Offense: $100 fine, letter, and phone call
- 3rd and Subsequent Offenses: $500 fine and letter

11.5 Resource Protection Response

The goal of a Resource Protection Response is to forestall an instream flow call and preserve stream health. During such a Response, the Eagle River Water & Sanitation District and Upper Eagle Regional Water Authority will enforce mandatory reductions in water use. Enforcement will focus on eliminating excessive or unsustainable water use by customers using water in billing tiers 3, 4, and 5.

Resource Protection Response Restrictions

During this Response, the following restrictions on water use will be implemented:

- Water usage will be limited to use in Tier 2 or less.
- ~~No new special irrigation permits will be issued.~~

Violations

Any customer who violates Resource Protection Response restrictions will be subject to the following penalties, in addition to any other fees, fines, or penalties authorized by these Rules and Regulations:

- 1st Offense: Warning letter and/or email

- 2nd Offense: $500 fine, letter, and Notice of Potential Disconnection
- 3rd Offense: $500 fine, $100 disconnection of water service fee, and disconnection of water service.

11.6 Public Health and Safety Response

The goal of a Public Health and Safety Response is to protect the aquatic environment from water diversions and ensure, to the extent possible, that there is adequate water for essential indoor and public safety/fire protection uses. During such a Response, the Eagle River Water & Sanitation District and Upper Eagle Regional Water Authority will prohibit all outdoor water use and limit indoor water use to essential uses.

Public Health and Safety Response Restrictions

During this Response, the following restrictions on water use will be implemented:

- Outdoor water use is prohibited unless the Board of Directors authorizes exceptions.
- Indoor water usage will be limited to use in Tier 1 only.

Violations

Any customer who violates the Public Health and Safety Response restrictions will be subject to the following penalties, in addition to any other fees, fines, or penalties authorized by these Rules and Regulations:

- 1st Offense: $500 fine and Notice of Potential Disconnection
- 2nd Offense: $500 fine, $100 disconnection of water service fee, and disconnection of water service.

For reconnection of service refer to section 1.11.

~~**11.7 Reconnection of Water Service**~~

~~If any customer's water service is disconnected due to non-compliance with these regulations, reinstatement of service is contingent on the customer's execution of a Water Service Reinstatement Agreement (see following page).~~

RULES AND REGULATIONS
FOR
WATER AND WASTEWATER SERVICE

EAGLE RIVER
WATER & SANITATION
DISTRICT

APPENDIX B

WATER AND WASTEWATER SERVICE CONSTRUCTION SPECIFICATIONS

Last Approved Revision: Feburary XX, 2024 ~~March 23, 2023~~

2.1 Materials

2.1.1 General Requirements

The District follows, and all water service construction shall conform to, the CDPHE lead-free policy. The joining of dissimilar metals in water service lines is prohibited.

2.1.2 Copper Tubing

Copper Water Services shall be 1", 1.5" or 2" diameter seamless Type K copper tubing in accordance with ASTM B88. Connections shall be compression in accordance with ANSI/AWWA C800 or silver soldered conforming to AMS 4773C. All shall be certified to comply with NSF/ANSI 61, NSF/ANSI 61 Annex G, and NSF/ANSI 372. No lead solder joints shall be allowed. All copper service lines must use full lengths of tubing (i.e., 100' for 1", 60' for 1.5" and 40' for 2") before a splice can be installed.

Installed Type K copper tubing shall be free of kinks, indentations, and damaged areas. Copper tubing must be properly reamed at all connections. Any damaged copper tubing or fittings may be rejected by the District Inspector.

An appropriate size gooseneck shall be made in the Water Service at the corporation valve to prevent the Service from being pulled from the Water Main during backfill and compaction operations.

2.1.3 Polyethylene Tubing (PE)

Polyethylene tubing used for water services shall meet the requirements of AWWA C901, shall be PE4710 high density resin material and conform to ASTM 2737 standards listed for water service pipe in the latest edition of the IPC. All joints shall be brass compression grip ring type with stainless steel inserts or fused. Polyethylene tubing shall have a pressure rating of 250 psi. All new polyethylene service lines shall be constructed using ~~must use~~ full lengths of new polyethylene tubing. Splices are not permitted on new service line installations. ~~(i.e. 300' for 1", 250' for 1.5" and 200' for 2") before a splice can be installed~~. Pipe dimensions shall meet Copper Tubing Size (CTS) standards.

2.1.4 Ductile Iron Pipe (DIP)

Water services greater than or equal to four (4) inches in diameter are to be constructed of ductile iron pipe, AWWA Class 52, with a pressure rating of 350 psi. Services to be constructed of ductile iron pipe must be designed by a licensed engineer and construction plans must be submitted to the District for approval.

2.1.5 Corporation Stops

Corporation stops shall be constructed of all brass construction with threaded taper or IP thread inlet and grip compression connection out in accordance with ANSI/AWWA C800 and conform to ASTM B584, UNS C89833 (latest revision). Corporation stops shall be Mueller 300 Ball Type Corporation Valve, Catalog Number B-25008N or B25028N or approved equal.

2.1.6 Curb Stops

Curb stops shall be of all brass construction with compression connections for inlet and outlet in accordance with ANSI/AWWA C800 and conform to ASTM B584, UNS C89833 (latest revision). Curb stops shall be Mueller 300 Ball Curb Valve No. B25209N, or approved equal. For service lines buried at a depth greater than nine and a half (9.5) feet, an extension rod must be placed on the curb stop.

2.1.7 Curb Boxes

Curb boxes shall be cast iron in accordance with ASTM A 48, Class 35B. For curb stops up to 1", curb boxes shall be Mueller H10314 with 89982 lid and stationary rod, part number 828- series, depending on final bury depth or approved equal. For curb stops larger than 1", the curb boxes shall be Mueller H10336 with 89982 lid or approved equal.

2.1.8 Saddles

Tapping saddles shall be Mueller BR2S or BR2W, AWWA C800, brass body, 200 psi maximum working pressure, double strap design, with optional 304L stainless steel straps.

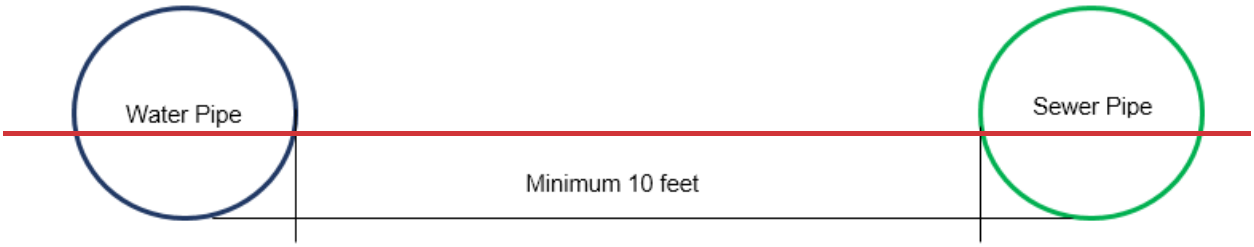
2.2 Service Line Design

The alignment of the Water Service shall take the shortest, most direct route from the Water Main to the Water Meter.

2.3 Separation of Services

~~2.3.1 Horizontal Separation Required~~

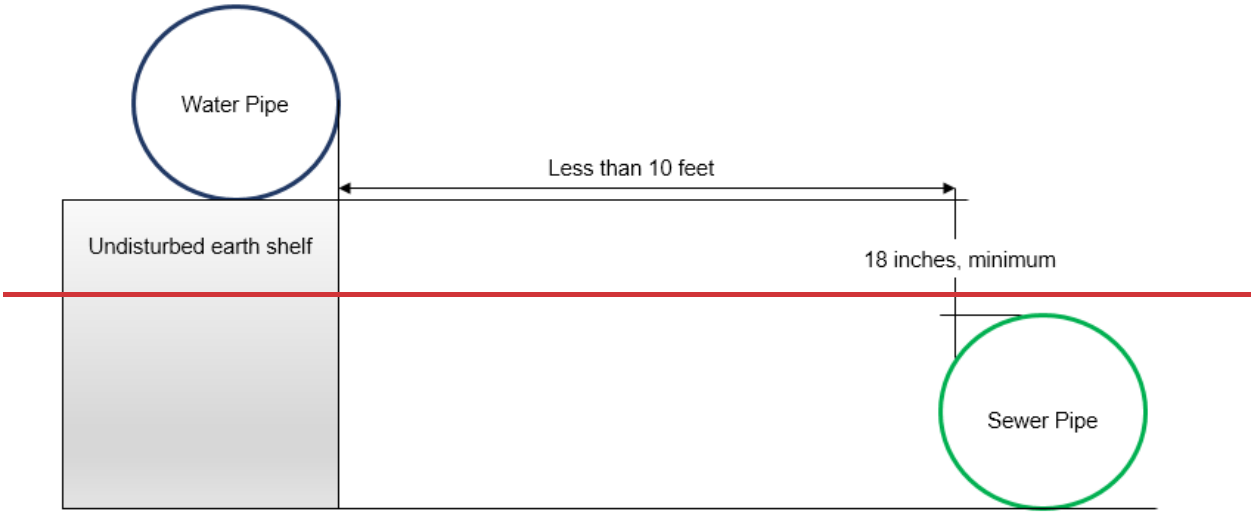
~~A horizontal separation of ten (10) feet must be maintained between parallel Water and Wastewater Services. Water and Wastewater Services shall not cross.~~



~~For parallel water service lines in a common trench, a minimum horizontal separation distance of six (6) inches must be maintained between edge of pipe to edge of pipe and service lines must be installed on the same horizontal plane, i.e., no vertical separation. This does not apply to the connection point at the water main. Service line taps must be a minimum of 18 inches apart.~~

~~2.3.2 Horizontal Separation Exception~~

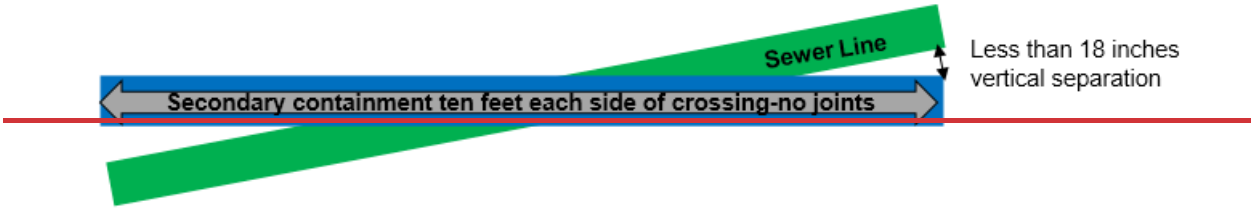
~~In cases where it is not practical to maintain a ten foot (10') separation between water and wastewater service lines, the District may allow installation of the sewer pipe closer to a water pipe utilizing encasement or pressure rated joints, provided that the water pipe is oin a separate trench or on an undisturbed earth shelf located on one side of the pipe and at an elevation so the bottom of the water pipe is at least eighteen inches (18') above the top of the sewer pipe.~~



~~2.3.3 Vertical Separation Required- Sewer under Water~~

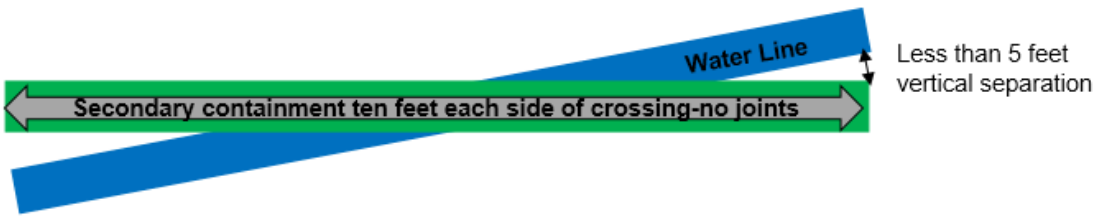
~~If the sewer service crosses under a water main but less than eighteen inches (18") of clear space will exist, the sewer service must be installed with secondary containment.~~

~~Acceptable options include a pipe casing extending no less than 9-feet each side of the crossing. The casing must be a single section of steel or ductile iron pipe. The design must include a means to support the interceptor or sewer main to prevent settlement and permit maintenance of the water main without damage to the sewer pipe. Alternatively, concrete or controlled low strength material (e.g., flowable fill) encasement of either pipe extending no less than 10-feet each side of the crossing may be used. Crossings involving jointless pipe such as HDPE or copper do not require installation of secondary containment.~~



~~2.3.4 Vertical Separation Exception - Water under Sewer~~

~~If the sewer service must cross above or over a water main, the sewer service shall be installed with secondary containment unless the vertical distance exceeds five feet (5'). Acceptable options include a pipe casing extending no less than 9-feet each side of the crossing. The pipe casing must be of watertight material with no joints. The casing pipe materials may be steel, ductile iron, fiberglass, fiberglass reinforced polymer mortar (FRPM), or polyvinylchloride (PVC) with suitable carrier pipe supports and casing pipe end seals. Alternatively, concrete or controlled low strength material (e.g., flowable fill) encasement of either pipe extending no less than 10-feet each side of the crossing may be used. Crossings involving joint less pipe such as HDPE or copper do not require installation of secondary containment.~~



X.X **Parallel installation of Mains, Services and Appurtenances**

Water mains and services must be laid at least ten feet (10) horizontally (edge to edge) from any existing or proposed sewer mains or services. Water appurtenances must also have a ten foot (10) separation from sewer appurtenances including manholes (measured outside to outside).

X.X.X Parallel Installation Exception

For parallel water services in a common trench, a minimum horizontal separation distance of six inches (6) must be maintained between edge of pipe to edge of pipe. Water services must be installed on the same horizontal plane, i.e. no vertical separation. This does not apply to the connection point at the water main. Water service line taps must be a minimum of eighteen inches (18) apart.

In cases where it is not practical to maintain a ten foot (10) separation, the District may allow installation of the water main or water service closer to a sewer pipe given the following requirements are met. The water pipe is on a separate trench or on an undisturbed earth shelf located on the “uphill” side of the sewer pipe and at an elevation, so the bottom of the water pipe is at least eighteen inches (18) above the top of the sewer pipe. The sewer pipe must also either be pressure rated meeting AWWA standards or be installed with secondary containment.

Acceptable options for secondary containment include a pipe casing that must be a single section of steel, ductile iron, or polyvinylchloride (PVC) with casing pipe end seals. The design must include a means to support the interceptor or sewer pipe to prevent settlement and permit maintenance of the water pipe without damage to either pipe. Alternatively, concrete or controlled low strength material (e.g., flowable fill) encasement of either pipe may be used.

X.X **Crossings of Mains and Services**

Water mains and services that cross existing or proposed sewer mains or services must be installed a minimum of eighteen inches (18) vertically outside edge to outside edge. At crossings, one full length of water pipe must be located so both joints will be as far from the sewer pipe as possible.

X.X.X Vertical Separation Exception Sewer under water

If the sewer main or service crosses under a water main or service, and there is less than eighteen inches (18) vertically between the outside edges of the pipes, the sewer pipe must be installed with secondary containment.

Acceptable options for secondary containment include a pipe casing extending no less than nine feet (9) each side of the crossing. The pipe casing must be a single section of steel, ductile iron, or polyvinylchloride (PVC) with casing pipe end seals. The design must include a means to support the interceptor or sewer pipe to prevent settlement and permit maintenance of the water pipe without damage to either pipe. Alternatively, concrete or controlled low strength material (e.g., flowable fill) encasement of either pipe extending no less than ten feet (10) each side of the crossing may be used. **Crossings**

involving jointless pipe such as HDPE or copper do not require installation of secondary containment.

X.X.X Vertical Separation Exception – Water Under Sewer

If the sewer main or service must cross above a water main or service, and there is less than five feet (5) vertically between the outside edges of the pipe the sewer pipe shall be installed with secondary containment.

Acceptable options for secondary containment include a pipe casing extending no less than nine feet (9) each side of the crossing. The pipe casing must be a single section of steel, ductile iron, or polyvinylchloride (PVC) with casing pipe end seals. The design must include a means to support the interceptor or sewer pipe to prevent settlement and permit maintenance of the water pipe without damage to either pipe. Alternatively, concrete or controlled low strength material (e.g., flowable fill) encasement of either pipe extending no less than ten feet (10) each side of the crossing may be used. **Crossings involving jointless pipe such as HDPE or copper do not require installation of secondary containment.**

2.4 Depth of Bury

Water Services shall be buried a minimum of seven (7) feet and a maximum of nine and a half (9.5) feet below the ground surface.

2.4.1 Service Insulation Requirements

For every foot of cover that is out of compliance with minimum cover requirements for water services~~mains~~, the District shall require the installation of ~~1-inch of~~ insulation board per Appendix E 1.14. The absolute minimum cover over a water service, when insulation is used, shall be 5 feet. Cover less than 7 feet shall only be allowed with written approval from the District prior to construction. ~~, minimum 2" insulation required. Insulation will be in accordance with ASTM C578-Type V Standard Specification for Rigid Cellular Polystyrene Thermal Insulation. Compressive Strength will be 100 psi minimum per ASTM D1621. Water Absorption, ASTM C272, 03% by volume, maximum. DOW STYROFOAM™ HIGHLOAD 100, OWENS CORNING FOAMULAR 1000 or approved equal.~~ In addition to maintaining cover from the ground surface, specified cover is required from storm sewer crossings and other cold air sources. See Insulation detail C-14 in Appendix C.

2.5 Bedding Material

Bedding material shall consist of uniformly graded granular material, 3/8-inch or ¾-inch minus screened rock material, installed six (6) inches below and twelve (12) inches above the Service pipe. Refer to Appendix E.

2.6 Underground Warning Tape

Underground warning tape shall be installed twenty-four inches (24") above all buried portions of the Water Service. The tape shall meet the following requirements:

(a) Four (4) mil thick Polyethylene tape
(b) Solid blue color with black lettering
(c) Six (6) inches in width

2.7 Tracer Wire

See Appendix E.

2.8 Curb Stop Location

The Curb Stop shall be located a within maximum of one (1) foot the property line or edge of easement and shall be easily accessible to District personnel. For new service line installations Curb Stops shall not be located underneath heated driveways. Refer to curb stop detail B-01 and B-02 for services less than or equal to 2” and B-03 and B-04 for services greater than or equal to 4”.

2.9 Fire System Services

Installation, inspection, and testing of underground fire lines shall meet all current adopted International Fire Code, NFPA 24 – Standard for the Installation of Private Fire Service Mains and Their Appurtenances, and local fire authority requirements. All installation work shall be performed by a contractor holding a State of Colorado Division of Fire Prevention and Control certification for underground fire line installation. Commercial Water Service connections for fire suppression systems shall be as required by the local fire authority. Residential connection of the fire suppression system to the Water Service shall occur downstream from the Curb Stop valve and upstream of the meter. Refer to Detail B-05.

2.10 Connections, Testing and Requirements for Inspection

2.10.1 Water Service Connections

Service Lines smaller than four inches (4”):

All Water Service connections of 1", 1.5”- and 2-inch diameter shall be made only by District personnel using a tapping saddle fitting on existing mains.

Service lines four inches (4”) or larger in diameter:

Water Service Connections 4 inch (4”) in diameter or greater shall be made by a qualified contractor on behalf of the Customer and witnessed and inspected by a District Inspector. For all connections 4" in diameter and larger, a tee shall be installed on the main or a wet tap may be made using a tapping sleeve with prior approval from the District. The tapping sleeve shall be stainless steel Mueller H304 (250 psi working pressure) or approved equivalent. The use of a tapping sleeve shall meet the following conditions:

(a) Tapping sleeve must be approved by the District prior to installation and may only be installed by an approved contractor.

Customers requesting Connections after November 15 and before April 15 must provide heating, adequate to prevent freezing of water, in the Connecting area.

2.11 Water Service Line Abandonment

For abandonment of 2-inch and smaller water service lines or stub outs, the corporation stop must be shut off and capped at the water main and the line disconnected. For abandonment of 4-inch or larger water service lines or stub outs, a mainline shutdown must be coordinated with a District Inspector, the curb stop valve and lateral will be removed, and a MJ flange or plug installed on the main line tee. Alternatively, a solid sleeve on the mainline is an acceptable abandonment method. All water service line abandonments must be inspected by a District Inspector prior to backfill.

2.12 Meter Assemblies

The following criteria dictate the design and installation of commercial and residential meter assemblies. A meter assembly consists of a pressure reducing valve, shutoff valves, backflow prevention device, water meter, and related appurtenances. All meter assemblies shall be ~~design~~designed and constructed per most recently adopted plumbing codes. Please refer to Detail B-05 for a schematic of the approved meter assemblies. Strainers shall not be allowed immediately before or after the meter assembly.

2.12.1 Pressure Reducing Valve (Domestic)

A pressure-reducing valve (PRV) shall be installed on all Water Services upstream of the water meter, ensuring that the water meter and the building plumbing system are protected from fluctuating water system pressures. Water Service will not be turned on until the meter assembly including the PRV is installed. The pressure setting of the PRV shall not exceed 100 psi without written permission from the District. Customers are responsible for ownership, maintenance and operation of Pressure Reducing Valves. The district recommends periodic inspection and maintenance per the manufacturer's recommendations.

2.12.2 Pressure Reducing Valve (Fire Suppression System)

A pressure-reducing valve (PRV) shall be installed on all fire sprinkler systems to ensure that they are protected from fluctuating water main pressures. The pressure setting of the PRV shall not exceed 200 psi without written permission from the District. Customers are responsible for ownership, maintenance and operation of Pressure Reducing Valves. The district recommends periodic inspection and maintenance per the manufacturer's recommendations.

2.12.3 Shutoff Valves

A shut-off, or isolation, valve shall be installed upstream of the PRV. Additionally, a shut-off valve shall be installed downstream of the backflow preventer isolating the meter assembly to facilitate repairs. For service lines up to 3 inches, ball or gate valves will be allowed. For service lines 3" and above, only gate valves will be allowed. Butterfly valves are prohibited. Refer to detail B-05.

2.12.4 Backflow Prevention Assemblies~~Devices~~

Backflow prevention assemblies~~devices~~ are required on all Water Services. Installation of backflow prevention assemblies must be certified "Lead Free" for all new construction and replacement assemblies. The "Lead Free" requirement is for all types of assemblies (e.g. fire, domestic, irrigation, etc.).No backflow preventers will be allowed inside of meter pits associated with new construction. For new construction in commercial and multi-family applications, all backflow preventers must be reduced pressure zone (RPZ) assemblies. Refer to Appendix G of these Rules and Regulations for Backflow Prevention regulations.

2.12.5 Water Meter

All domestic connections to the District's Water System shall include a Water Meter. The meter type and size shall be determined by the District. The District will provide the Customer with a meter once the Customer has paid the appropriate meter fee.

The Customer shall install the meter per the specifications below.

(a) The location of the meter is subject to District approval. The meter location shall be adequately insulated to protect from freezing, fully accessible, adequately ventilated, well-lit, and shall not meet the definition of confined space, as defined by the Occupational Safety and Health Administration (OSHA), unless approved by the District. The design of meter pits must be approved by the District and shall be in conformance with Section 2.14. Meters in crawl spaces are not recommended. Crawl space meter installations are subject to prior approval by the District's meter technician. Any meter installation in a crawl space must have adequate lighting, adequate working room, and be within (3) feet of the opening.

(b) The District shall inspect the installation of all water meters. The Customer will be provided with a three-strand wire for installation of a transmitter. Prior to meter inspection and water Turn-On, the Customer shall install the meter assembly and the wire from the meter location to an appropriate transmitter installation site. The transmitter will be located five (5) feet above ground in an accessible location free from snow that will provide year-round access for District personnel. The maximum distance from the meter to the transmitter shall not exceed one

hundred (100) feet without approval of the District. Meters shall be installed in a horizontal only. The Meter shall be no higher than three (3) feet above and no lower than six (6) inches above the floor, as measured from the bottom of the Meter.

(c) The Customer is solely responsible for protecting the meter from freezing, or any other physical damage.

(d) No yokes or corner horns are permitted in new meter installations. Existing yokes and corner horns shall be removed when modifications are made to the meter set assembly e.g. when a pressure reducing valve is replaced.

(e) Meter sets require a "straight pipe" for five times the diameter of the pipe upstream and three times the diameter of the pipe downstream of the meter for new installations of 1.5 inch and greater.

Water will remain turned off until the District accepts payment of all Connection fees.

2.12.6 Bypass Piping on Commercial Meters

All water meters greater than 3 inches or larger in size and serving six (6) or more Residential Units, mixed commercial/residential developments, or a commercial development shall be installed with a bypass line equipped with isolation valves to allow for maintenance of the meter without interruption of water service to the Customer. The bypass line will be unmetered and secured with a District padlock. Refer to Detail B-05.

2.13 Stop and Waste Valves

Stop and waste valves are prohibited.

2.14 Meter Pits

Meter pits shall be adequately sized to contain the meter assembly and allow for maintenance of the assembly. Meters will be required to be installed in a precast concrete manhole with an overall depth of no less than 84 inches.

Meter pits shall be installed at the property line or the edge of easement, and downstream of the Curb Stop valve. A 5' high 4" x 4" post shall be provided for the Radio Transmitter Unit. A 3-strand wire provided by the District shall be run from the meter to the top of the post. A ½-inch galvanized rigid conduit 24" in length shall be installed on the bottom of the post to protect the wire a minimum of 18" up from ground level. Refer to Detail B-06 and B-07.

Temporary meter pits must be completely removed after construction and repairs to the water service line made per Appendix B-2.15

2.14.1 Manhole Bases

Precast concrete, ASTM C478, minimum 48-inch diameter or District approved alternative.

2.14.2 Manhole Sections

Precast concrete, ASTM C478, with the inside lip higher than the outside lip, minimum 48-inch diameter or District approved alternative. Concrete cone sections shall be eccentric.

2.14.3 Manhole Rings and Covers

For installations located in public rights of way manhole rings and covers shall be cast iron, ASTM A48, with a flat lid with the lettering “WATER” cast on the cover. Ring and cover combined weight shall be greater than 255 pounds and machined to fit securely with a non-rocking cover. Lid shall be waffle patterned, and able to withstand HS-20 traffic loading.

2.14.4 Manhole Steps

For concrete manholes only, non-skid steps shall be installed capable of carrying a load of 1,000 pounds, installed six (6) inches from the face of the manhole. The steps shall conform to ASTM C478 and be plastic coated.

2.14.5 Manhole Joint Sealant

Double RUBR-NEK LTM butyl rubber flexible gasket-type sealant shall be applied to all manhole joints with RUB'R-NEK primer. One (1) inch on 48-inch diameter manholes; 1.5 inch on all larger sizes.

2.15 Repair Couplings

Repairs to Water Services located between the curb stop and the structure that require couplings shall be made only by the use of a silver-soldered joint or electrofusion for copper and HDPE, respectively. Solid sleeves are to be used with DIP. All repairs shall be inspected and approved by the District prior to backfill.

3.1 Materials

3.1.1 Polyvinyl Chloride (PVC) non-pressure:

SDR-35/SDR-26

4 to 8 inches (4" to 8"): ASTM D3034, SDR-35/PS46 or ASTM D3034, SDR-26/PS115

Maximum pipe length shall be 20 feet (20'). Joint lubricant shall be supplied by the pipe manufacturer. Joint lubricant shall be non-toxic and water-soluble.

3.1.2 Polyvinyl Chloride (PVC) pressure:

Yelomine: SDR-21, Restrained joint PVC pressure pipe and fittings having a minimum cell classification of 12454, as defined in ASTM D1784. Conform to ASTM D2241 "Standard Specifications for PVC, pressure rated pipe, 200 psi (SDR Series)."

AWWA C-900 for 4 " through 8" diameter pipe, pressure class 235 psi, DR18, with push-on joints and flexible elastomeric seals ASTM D3139/ASTM F477. All spigot ends shall be beveled to manufacturer's specifications with gaskets meeting ASTM F477 and joints in compliance with ASTM D3139.

For 1 ½" service lines utilizing an ejector pumping system, either Polyethylene (PE) or PVC shall be used. PE piping shall be AWWA C901, pressure class 150 psi. Joints shall be fusion type in accordance with AWWA C901. PVC shall be schedule 80 meeting the requirements of ASTM D1785, with solvent welded, socket type fitting meeting the requirements of ASTM D2467.

3.1.3 Ductile Iron:

Pipe per ASTM A746, Class 52, 350 psi, AWWAC151. Push-on joints per ANSI/AWWA C111/A21.11. Factory applied Protecto 401, or equivalent, ceramic epoxy interior lining for DIP & fittings. U.S. Pipe and Foundry Company/Griffin Pipe Products or approved equal.

3.2 Service Line Design

(a) The Wastewater Service gravity piping shall be four (4) inch or greater in diameter.

(b) Gravity wastewater services shall be installed at a constant grade of not less than one quarter (¼) inch per foot, (2%) with a minimum of bends and no glue joints.

(c) Clean Outs should be installed every 100 feet, at every change of direction greater than 45 degrees, and a maximum of three (3) feet from the face of the building or inside the building footprint with dual direction sweeps. Cleanouts located within ROW require a traffic rated cleanout cover.

(d) If the service line is pressurized via lift station or ejector system, the service line shall be designed by an Engineer and submitted with the Connection Application for review and approval by the District.

(e) The service line must be electronically locatable from the sewer main to the structure or building being served, terminating at the cleanout located near the building footprint and applicable details in this Appendix. Refer to Appendix E.

(f) If the wastewater service line will be used in connection with a food service establishment, a Control Manhole shall be installed per the requirements in Article 6.9.6 and designed by an Engineer.

3.3 Separation of Services

Refer to Appendix B, Section 2.3

3.4 Depth of Bury

Wastewater Service linesinsulatio ~~piping~~ shall be buried a minimum of four feet six inches (4' 6") and a maximum of fourteen feet (14) below the ground surface. ~~If minimum bury depth cannot be achieved, insulation is required per Appendix D. A depth of bury greater than fourteen (14) feet requires the approval of the District.~~

3.4.1 Service Insulation Requirements

For every foot of cover that is out of compliance with minimum cover requirements for sanitary sewer service lines, the District shall require the installation of insulation board per Appendix E 1.14. The absolute minimum cover over a sanitary sewer service line, when insulation is used, shall be 3 feet. Cover less than 4.5 feet shall only be allowed with written approval from the District prior to construction. In addition to maintaining cover from the ground surface, specified cover is required from storm sewer crossings and other cold air sources. See Insulation detail C-14 in Appendix C.

3.5 Bedding Material

Bedding material shall consist of uniformly graded granular material, 3/8-inch or ¾-inch minus screened rock material, installed six (6) inches below and twelve (12) inches above the Service pipe. Refer to Appendix E.

3.6 Underground Warning Tape

Underground Warning Tape shall be installed twenty-four inches (24") above all buried portions of the Wastewater Service. The tape shall meet the following requirements:

(a) Five (5) mil thick Polyethylene tape
(b) Solid green color with black lettering
(c) Six (6) inches in width

3.7 Tracer Wire

See Appendix E

3.8 Connections, and Requirements for Inspection

3.8.1 Wastewater Service Connections

The connection of the Wastewater Service to the Wastewater Main shall be made as follows:

(a) A factory wye shall be installed on all new mainline installations for service line stub outs on gravity mains. The wye shall be located no closer than ten (10) feet from a manhole. A saddle tap, provided by the District, shall be used on new service line connections to existing mainlines. All service connections shall be above spring line.

(b) On four-inch (4") or six inch (6") diameter new service connections to existing mains, a saddle connection is required. The saddle connection shall be located no closer than ten (10) feet from a manhole. The flow line of the Service pipe shall enter the Main above the spring line of the Main. Connections into manholes are prohibited. All Connections up to six (6) inches in diameter shall be made by District personnel, and 48 hours prior notice is required to confirm saddle availability, and confirmation of existing sewer main material. If the Service pipe is eight (8) inches or greater in diameter, the connection shall be made into an existing manhole or into a new manhole placed on the existing Main. Connections eight (8) inches or greater in diameter shall be made by a qualified contractor on behalf of the Customer and witnessed and inspected by a District Inspector.

~~(b)~~(c) Sewer service connections are not permitted in areas where the sewer main is less than 4'6" deep.

3.8.2 Wastewater Service Requirements for Inspection

No Services shall be covered with bedding material or backfill without the District Inspector's approval. All portions of the Wastewater Service must be visible to the District Inspector for an inspection to be completed.

RULES AND REGULATIONS

FOR

WATER AND WASTEWATER SERVICE

EAGLE RIVER
WATER & SANITATION
DISTRICT

APPENDIX C

STANDARD SPECIFICATIONS FOR WATER MAINS

Last Approved Revision: March 23, 2023

SECTION II – DISTRIBUTION SYSTEM DESIGN AND LAYOUT

2.1 General Requirements

The District requires an Overall Utility Site Plan of the project to be submitted indicating all utilities and their proposed locations for review prior to Construction Plan Approval. All plans submitted shall include a geotechnical report if requested by the District. The design and installation of all facilities shall ensure development of an integrated distribution system and in general shall be the most efficient layout possible to serve the proposed development. All buried pipelines shall be electronically locatable with a tracer wire system as specified in Appendix E

2.2 Corrosion

Corrosive soils are present in the District's service area and may lead to the premature degradation of pipe materials and appurtenances. Please refer to Article IX for corrosive soils procedure.

2.2.1 Dissimilar Materials

Cathodic protection and insulation shall be installed as required by the District. Particular care shall be taken to insulate between dissimilar materials.

2.2.2 Insulating Joints

Whenever it is necessary to join pipe of dissimilar metal, or when designated by the District, a method of insulating against the passage of electrical current, approved by the District, shall be provided. Special care shall be exercised during the installation of these joints to prevent electrical conductivity across the joints.

2.3 Sizing Distribution Mains

All mains shall be sized large enough to provide for domestic, irrigation, and fire protection flows to the area requesting service without exceeding maximum pipe velocities of 8 feet per second. The minimum size of all District mains shall be eight inches (8") and developers/property owners shall be responsible for all water main extensions up to and including twelve (12) inches in diameter.

The District reserves the right to request oversized mains to provide service for projected future needs. The additional cost for the oversizing beyond 12-inches in diameter may be negotiated between the District and the Applicant and will be reviewed on a case-by-case basis.

2.4 Fire Protection

The Applicant shall coordinate with the District and local fire protection jurisdiction to determine minimum fire protection flow and shall design line sizes accordingly. The quantity and location of fire hydrants in a given area must be approved by the appropriate governmental agency.

The Applicant shall perform all fire hydrant "flow tests". Results of "flow tests" shall be

provided to the District and to the local fire authority. All costs associated with the "flow test" shall be borne by the Applicant. The District shall witness and oversee the "flow test" in conjunction with other appropriate governmental agencies.

2.5 Distribution Regulating Requirements

Regulating installations are required to control pressure, provide pressure relief, and separate pump and gravity zones throughout the distribution system. When main extension plans are submitted for review, the need for regulating installations must be approved by the District as determined by existing and proposed pressure zones, booster pump areas and the existing distribution system piping. Regulating installations shall be categorized as follows:

(a) Pressure Regulating Station

(b) Check Valve Station

(c) Surge Control Station

Location, design, and pressure settings of main line pressure regulating devices will be determined by the District on a case-by-case basis. All regulating installations are considered Major Facilities and will be designed and constructed by the District.

2.6 Layout of the Distribution System

2.6.1 Easement Width Requirements for Main Installations

All mains shall be installed in dedicated public street rights-of-way or, when ROW installation is not possible, a dedicated water line easement. The installation of Public Water facilities on developable lots or tracts intended for private use should be avoided to the extent practicable. The standard easement width for all mains shall be a minimum of 20 feet and depth of cover shall be 7 feet to 9.5 feet. The main shall be generally centered within the easement. The easement width shall be in accordance with Standard Detail C-15.

2.6.2 Fire Hydrants

Fire hydrant ~~branch~~ laterals ~~lines~~ shall be set at right angles to street mains. The fire hydrant shall be set at the end of the lateral~~branch line~~ and shall face the direction as dictated per local fire authority. No bends or offsets shall be used in installing fire hydrant lateral ~~branch line~~s unless approved by the District. Under no circumstances shall anylat size or manner of tap be made on a fire hydrant branch line between the hydrant and hydrant valve. The maximum length of a 6-inch hydrant branch line is 50 feet. All fire hydrant valves shall be attached to the tee off of the main. A fire hydrant shall be installed at the end of all dead-end water mains.

Fire hydrant depths shall be 7-feet to 9.5-feet. All fire hydrants shall be installed within dedicated streets, rights-of-way, or easements as herein above defined. Fire hydrant flange elevations shall be indicated on plans.

Fire hydrants shall be installed at locations approved by the Fire Department, the District and the appropriate governmental agency.

2.6.3 Pipe Bollards

Pipe bollards are required where there is less than three (3) feet clearance to a vehicle drive isle, edge of pavement or back of curb (whichever is less). Pipe bollards must be three feet minimum height. No pipe bollards shall be constructed in front of fire hydrant outlets. Bollard must be painted “traffic signal yellow” or approved equal. See detail C-16

2.6.4 Line Valves

Line valves are required at a minimum of every one thousand (1,000) feet. Additional valves, subject to District approval, are required to further isolate the system at all main branches, and at other locations as determined by the District for operation of the water system. A smaller diameter bypass line and valve may be required to facilitate large diameter valve opening in high pressure applications, as determined on a case-by-case basis. The applicant shall identify all locations on their submittal where line diameters exceed 12” and static pressures exceed 100 psi. The District will then determine the appropriate desired solution (valve type and/or bypass).

2.6.5 Joint Restraint

Water mains require the use of joint restraints such as thrust blocks and mechanical joint restraints. Mechanical joint restraints shall be used in conjunction with all thrust block installations at all bends and fittings. Thrust blocks may be eliminated at the District’s discretion on a case-by- case basis if joint restraints and restrained pipe lengths have been calculated by a Registered Professional Engineer. In all cases when water mains are installed in a fill condition rather than in undisturbed earth, mechanical or internal joint restraints shall be required.

All thrust blocks shall be constructed per the District’s Concrete Thrust Block details C-03, C-04, and C-05 and Material Specification 3.6. Submitted construction drawings shall identify all thrust blocks with specific station numbers (at valves, fire hydrants, bends & where required). All thrust blocks shall be inspected and approved by the District Inspector prior to backfill.

2.6.6 Groundwater Barriers

Groundwater barriers may be required in areas where the groundwater table is encountered. The presence or absence of groundwater should be determined in the geotechnical investigation. The contractor shall notify the Engineer and District Inspector immediately if groundwater is encountered in an excavation.

2.6.7 Depth of Bury

The depth of cover for water mains shall be a minimum of seven feet (7') and a maximum of nine feet six inches (9'-6") from finish grade to the top of the water mainline. Any water main that is outside of the required depth of bury must have an approved variance.
Under no circumstances may a water main be buried with less than five feet (5’) of cover. For cover of less than 7 feet refer to Appendix C section 2.6.13.

2.6.8
(Parallel and Crossing Pipes Addition.docx)

X.X **Parallel installation of Mains, Services and Appurtenances**

Water mains and services must be laid at least ten feet (10) horizontally (edge to edge) from any existing or proposed sewer mains or services. Water appurtenances must also have a ten foot (10) separation from sewer appurtenances including manholes (measured outside to outside).

X.X.X Parallel Installation Exception

For parallel water services in a common trench, a minimum horizontal separation distance of six inches (6) must be maintained between edge of pipe to edge of pipe. Water services must be installed on the same horizontal plane, i.e. no vertical separation. This does not apply to the connection point at the water main. Water service line taps must be a minimum of eighteen inches (18) apart.

In cases where it is not practical to maintain a ten foot (10) separation, the District may allow installation of the water main or water service closer to a sewer pipe given the following requirements are met. The water pipe is on a separate trench or on an undisturbed earth shelf located on the “uphill” side of the sewer pipe and at an elevation, so the bottom of the water pipe is at least eighteen inches (18) above the top of the sewer pipe. The sewer pipe must also either be pressure rated meeting AWWA standards or be installed with secondary containment.

Acceptable options for secondary containment include a pipe casing that must be a single section of steel, ductile iron, or polyvinylchloride (PVC) with casing pipe end seals. The design must include a means to support the interceptor or sewer pipe to prevent settlement and permit maintenance of the water pipe without damage to either pipe. Alternatively, concrete or controlled low strength material (e.g., flowable fill) encasement of either pipe may be used.

X.X **Crossings of Mains and Services**

Water mains and services that cross existing or proposed sewer mains or services must be installed a minimum of eighteen inches (18) vertically outside edge to outside edge. At crossings, one full length of water pipe must be located so both joints will be as far from the sewer pipe as possible.

X.X.X Vertical Separation Exception Sewer under water

If the sewer main or service crosses under a water main or service, and there is less than eighteen inches (18) vertically between the outside edges of the pipes, the sewer pipe must be installed with secondary containment.

Acceptable options for secondary containment include a pipe casing extending no less than nine feet (9) each side of the crossing. The pipe casing must be a single section of steel, ductile iron, or polyvinylchloride (PVC) with casing pipe end seals. The design must include a means to support the interceptor or sewer pipe to prevent settlement and permit maintenance of the water pipe without damage to either pipe. Alternatively, concrete or controlled low strength material (e.g., flowable fill) encasement of either pipe extending no less than ten feet (10) each side of the crossing may be used. **Crossings**

involving jointless pipe such as HDPE or copper do not require installation of secondary containment.

X.X.X Vertical Separation Exception – Water Under Sewer

If the sewer main or service must cross above a water main or service, and there is less than five feet (5) vertically between the outside edges of the pipe the sewer pipe shall be installed with secondary containment.

Acceptable options for secondary containment include a pipe casing extending no less than nine feet (9) each side of the crossing. The pipe casing must be a single section of steel, ductile iron, or polyvinylchloride (PVC) with casing pipe end seals. The design must include a means to support the interceptor or sewer pipe to prevent settlement and permit maintenance of the water pipe without damage to either pipe. Alternatively, concrete or controlled low strength material (e.g., flowable fill) encasement of either pipe extending no less than ten feet (10) each side of the crossing may be used. **Crossings involving jointless pipe such as HDPE or copper do not require installation of secondary containment.**

2.6.8 Location Tape

All lines connected to District mains in any way shall be marked with the appropriate locating tape per Section 3.5.

2.6.9 Abandonment of Existing Water Mains, ~~and~~ Valves, and Appurtenances

All abandoned water mains shall be appropriately terminated at the main connection with a mechanical joint cap, plug or equivalent. The Contractor shall maintain the existing waterline until such time as the new waterline has been disinfected, pressure tested and accepted. Valve boxes on abandoned lines shall be completely removed and backfilled. When abandoning fire hydrants, the full assembly must be removed down to the lateral, a cap must be placed on the lateral both at the main and distal end where the hydrant assembly was removed.

2.6.10 Pipe Deflections/Bends

All plans must indicate deflections, elbows, bends, and the degree of deflection. Pipe deflections shall not exceed the Manufacturer's maximum recommended deflection, or the values identified in Tables C-1and C-2 below, whichever is lower. Joint restraints shall be used in all change of direction fittings. The use of two 45-degree elbows is preferable to the use of 90-degree elbows. The use of 90-degree elbows will be considered on a case-by-case basis.

Normal Pipe Size (in.)	Deflection Angle (deg.)	Max. Offset (inches)		Approximate Radius of Curve Produced by Succession of Joints (feet)	
		L = 18’	L = 20’	L = 18’	L = 20’
4	5	19	21	205	230
6	5	19	21	205	230
8	5	19	21	205	230
10	5	19	21	205	230
12	5	19	21	205	230
14	5	19	21	205	230
16	5	19	21	205	230
18	5	19	21	205	230
20	5	19	21	205	230
24	5	19	21	205	230

Table C-1 - Maximum Deflection Full Length Pipe - Push-On Joint Pipe

Normal Pipe Size (in.)	Deflection Angle (deg.)	Max. Offset (inches)		Approximate Radius of Curve Produced by Succession of Joints (feet)	
		L = 18’	L = 20’	L = 18’	L = 20’
4	5	19	21	205	230
6	5	19	21	205	230
8	5	19	21	205	230
10	5	19	21	205	230
12	5	19	21	205	230
14	4	15	17	260	285
16	3 3/4	14	16	275	305
18	3 3/4	14	16	275	305
20	3 1/2	13	15	295	327
24	3	11	12	345	380

Table C-2 - Maximum Deflection Full Length Pipe - Restrained Joint Pipe

2.6.11 Tees/Crosses

All perpendicular main to main connections shall be made by cutting in a tee or cross. Tees and crosses shall be clearly indicated on the plans, and valves shall be installed on each leg. Wet taps shall not be permitted for mainline extensions. Refer to Appendix B for service line connection requirements.

2.6.12 Pressure Reducing Valve Vaults

All pressure reducing valve vaults shall be located out of the roadway, but within the right-of-way or an adjacent utility easement.

2.6.13 Main Insulation Requirements

For every foot of cover that is out of compliance with minimum cover requirements for water mains, the District will require the installation of ~~1-inch~~ of insulation board per Appendix E ~~Section 1.14~~1.14. The absolute minimum cover over a water main, when insulation is used shall be 5’. Cover less than 7’ shall only be allowed with written approval from the District prior to construction. In addition to maintaining cover from the ground surface, specified cover is required from storm sewer crossings and other cold air sources.

2.6.14 Air Vac Vaults

At all high points in the distribution system, a combination air vacuum and air release

valve shall be installed on the main in a minimum five-foot (5') diameter manhole. A high point is considered to be one pipe diameter in grade differential.

2.6.15 Minimum Distance from Structures

All main extensions shall be installed at a minimum distance of ten feet (10') from all structures or at a one foot horizontal to one-foot vertical (1:1) ratio from the bottom of any structural element, whichever is greater. Encroachments of structures into easements are discouraged and shall only be allowed by written authorization from the District.

2.6.16 Encased Piping

If required by the District, CDPHE regulations, or other governing body, water mains may need to be installed in a casing pipe. Refer to ~~Appendix D, 2.6 pipe crossings.~~section 2.6.X (parallel and crossing pipes))
Materials and installation of water mains in casing pipes shall be in conformance with Section 3.8.

2.7 Operating Pressures

Water system materials shall be specified for an operating pressure of 250 psi. The distribution system shall be designed such that the minimum operating pressure at any tap shall be 60 psi and the maximum operating pressure shall not exceed 190 psi.

2.8 Protection of Potable Water Supplies

Please refer to Appendix D, Section 2.6 for design criteria relative to water main installation in proximity to sanitary sewer infrastructure.

2.9 Steep Slope Applications

Slopes with greater than 20% grade require the use of with Anchor Blocks/Cutoff Collars in conjunction with restrained joints. If specifying internally restrained joints: The Joints shall be extended after assembly to minimize joint take-up in test and /or in service. This shall be accomplished by pulling or jacking the spigot away from the socket until firm resistance is encountered. See Detail C-10

the various sizes of bolts shall be as follows:

Table C-3: Torque and Bolt Size

Pipe Diameter (inches)	Bolt Size (inches)	Range of Torque (Foot-Pounds)
4 - 24	5/8”	75 - 90
30 - 36	3/4”	100 – 120

Nuts spaced 180 degrees apart shall be tightened alternately in order to produce equal pressure on all parts of the gland.

Marking Tape

The installation of blue marking tape is required on all water mains and service lines. The tape shall be installed approximately 24-inches (24") above the main or line. The tape shall meet the specifications listed in 3.5.

4.12 Installation of Valves

Valves shall be handled in such a manner as to prevent any injury or damage. All joints shall be thoroughly cleaned before installation.

Valves shall be set and joined to the pipe in the manner previously specified for cleaning, installing and joining push-on and mechanical joint pipe. Valves shall be set in such a manner that the valve stems are plumb. Valves shall be wrapped with polyethylene encasement material in accordance with 3.2.10.

8-inch and larger valves should be provided with support, crushed stone or a thoroughly tamped trench bottom (95% Standard Proctor Density per AASHTO T99).

Valves shall be operated prior to installation to ensure good operating condition.

4.12.1 Valve Box Installation

A valve box shall be provided for every valve. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the operating nut of the valve, with the box cover set to the required elevation. No internal screws shall be permitted in the valve box. It will be the responsibility of the Applicant to ensure that valve boxes are ~~plumb and~~ raised to inspector approved ~~finish grade~~ elevation in field.

4.12.2 Installation of Fittings

All buried fittings in the system shall be mechanical joint applications and joined per 3.2.5 and 3.2.6

4.13 Fire Hydrants

4.13.1 Installation

Fire Hydrants shall be installed in conformance with drawing C-08. The location of all hydrants shall be staked. Final location and grade shall be in accordance with the approved drawings and care shall be taken to set hydrant grade-line marking at the finished grade elevation. Offset stakes not farther than 12 feet from the fire hydrant are acceptable. All hydrants shall stand plumb.

Each hydrant shall be connected to the main by a six-inch (6") lateral~~branch line~~. An independent six-inch (6") gate valve shall be installed on the tee off of the water main. The six-inch (6") lateral~~branch line~~ servicing the fire hydrant shall not be longer than 50 feet. If the length of the lateral~~branch line~~ extends beyond 50 feet, an eight-inch (8") main with an
eight-inch (8") by six-inch (6") concentric reducer shall be used from the main until a point 50 feet from the hydrant is reached. At that point, a six-inch (6") lateral~~branch line~~ may be extended to the fire hydrant.

No service line connections shall be installed between the fire hydrant and the fire hydrant guard valve, or anywhere on the six-inch (6") lateral~~branch line~~ servicing the fire hydrant.

4.13.2 Anchorage

The shoe of each hydrant shall be well braced against the un-excavated earth at the end of the trench with a concrete thrust block. Care shall be taken not to cover the weep holes with concrete and bond breaker shall be installed between the concrete thrust block and the hydrant. Hydrants and laterals~~branch lines~~ shall be wrapped with polyethylene encasement material in accordance with 3.2.10. The bottom of the hydrant bowl and the hydrant valve shall be supported with minimum 18 x 8 x 4- inch precast concrete blocking slabs or a District approved equal. The hydrant assembly shall require megalug or other approved joint restraints.

4.13.3 Drainage

Wherever a hydrant is set, drainage shall be provided at the base of the hydrant by placing approved rock material from the bottom of the trench, to at least 12 inches above the barrel flange of the hydrant, as shown on the typical fire hydrant detail. The minimum distance from the bottom of the trench to the bottom of the hydrant elbow shall be six inches (6"). The minimum of approved uniformly graded gravel, cobble, or crushed rock placed therein shall be 1 cubic yard.

4.13.4 Clearances

The minimum clearances around all fire hydrants shall be: ten feet (10') in the front, seven feet (7') on the sides, four feet (4') on the back, and 20 feet above except where bollards are required.

EAGLE RIVER
WATER & SANITATION
DISTRICT

Form C1: Pre-Construction Meeting Checklist for Water Main Installation

Project: _____ **Location:** _____

Date: _____ **Attendees:** _____

☐ **1. Customer Notification**

☐ **2. All licenses and permits are secured for work.**

☐ **3. A bill of materials has been provided and reviewed.**

☐ **4. Site Safety**

✓ OSHA safety standards and practices apply.

☐ **5. Survey**

✓ Survey layout is complete and surveyor retained for as-built locations.

☐ **6. Minimum Depth of Bury and Bedding**

✓ Seven to nine foot six inches (7'-9.5')
✓ In cases where minimum bury depth cannot be achieved, one inch (1") of approved insulation will be required per foot of missing cover, minimum 2 inches.
✓ Six inches (6") of approved bedding material under the pipe and twelve inches (12") over the top of pipe.

☐ **7. Cutting of Pipe**

✓ All cuts will be straight, true and **beveled**. All burrs will be removed from the ends of cut pipe and the ends lightly rasped or filed.

☐ **8. Tracer Wire and Joint Bonding**

✓ Tracer wire *#12 AWG 0.1019" diameter copper conductor or copper clad steel insulated with a 30 mil, high-density, high molecular weight polyethylene (HDPE) insulation, blue in color, and rated for direct burial use at 30 volts. Tracer wire will be installed on all water mains and service lines.
✓ The Applicant shall submit plans for a complete tracer wire system.
✓ All new mainline trace wire installations shall be located by the applicant using typical low frequency (512Hz) line tracing equipment, witnessed by the inspector, contractor, engineer and facility owner as applicable, prior to acceptance of ownership.

- ✓ Tracer wire grounding anode at all dead ends
- ✓ Tracer wire splicing/connections shall include two and 3 way lockable connectors or a three way lug connector specifically manufactured for use in underground trace wire installation
- ✓ A No. 4 conductor and cad-welds or continuity straps will be used to bond each joint and fitting.

☐ 9. Marking Tape and Locating Disk

- ✓ Marking tape will be placed twenty-four inches (24") above the pipe for all main and service lines. Marking tape shall be solid blue color with black lettering six inches (6") wide and of five (5)-mil thick PVC material.
- ✓ A 3M disk marker will be placed at all service curb stops with a maximum four foot (4') bury from finish grade

☐ 10. Thrust Blocks and Anchors

- ✓ Concrete thrust blocks and anchors will be used in conjunction with mechanical joint restraints. All mechanical joints require megalugs. Thrust blocks will be poured and formed per District specifications and inspected by the District inspector prior to backfill.

☐ 11. Fire Hydrants

- ✓ Fire hydrants will be Mueller Centurion Mountain hydrants with a fire hydrant marker flag installed. Fire hydrants will be installed to the bury line on the fire hydrant stand pipe and a maximum of six inches (6") below the flange. Fire hydrant extensions are not allowed on new construction.

☐ 12. Testing

- ✓ Allow a minimum of five (5) days for testing for each test segment; 24 hours for high and low chlorine tests, two consecutive sets of bacteriological tests taken 24 hours apart and hydrostatic pressure testing of mains and required assets. Main lines will be disinfected and bacteriological samples approved prior to hydrostatic pressure tests. Disinfection must be per ANSI/AWWA C651 using calcium hypochlorite granules, not tablets. The contractor is responsible for disposal of chlorinated water used for disinfection. No main, which has been disinfected and flushed, shall stand stagnant for more than 15 days without being re-flushed and a new disinfecting test performed, passed, and approved by the District.

☐ 13. Tapping and Service Lines

- ✓ Service lines will not be tapped until the main has passed all testing procedures.
- ✓ Service lines will be tapped above the spring line of the pipe (10 or 2 o'clock position)

☐ 14. Valve and Curb Stop Boxes

- ✓ All curb stop boxes will require extension rods.
- ✓ The top of the shaft will be between 18 and 24 inches below final grade.
- ✓ All valve boxes are to be centered and plumb over the operating nut
- ✓ Contractors are not permitted to operate valves or curb stops.

☐ 15. Stub Outs

- ✓ Stub outs will be only allowed to the edge of easement or the property line.

☐ 16. Design Changes

- ✓ Engineer must submit any design changes to Construction Review prior to implementation. Minor field changes may be approved by the District inspector and must be reflected on as-built documentation.

☐ 17. Water Service Connection

- ✓ Any type of rebuild or remodel may require the payment of additional tap fees.
- ✓ No service connections will be made until Construction Acceptance is granted.
- ✓ No service line will be extended into the property until Customer Service has been provided the required documents and the account number has been assigned.
- ✓ Service line inspections will only occur after authorization has been granted by the Customer Service Department.
- ✓ Connection prior to the payment of the entire assessed tap fee will result in an "unauthorized connection" assessment.

☐ 18. Construction acceptance includes the following:

- ✓ Rough grade inspection.
- ✓ All chlorine, bacteriological, and pressure tests approved.
- ✓ All valve boxes, fire hydrants and Air Vac/PRV vaults to grade and operated.
- ✓ Drawings of record submitted and approved.
- ✓ Easement documentation.
- ✓ Project costs.
- ✓ Bill of sale.

☐ 19. Warranty Period-

- ✓ Will not start until Drawings of Record, Recorded Easement Documents, Project Costs Documents and Bill of Sale are received and approved by the District

Reference: Eagle River Water and Sanitation District Rules and Regulations Appendix C – Standard Specifications for Water Mains

Contractor:_____ **Engineer:**_____

Owner:_____ **Inspector:**_____

RULES AND REGULATIONS
FOR
WATER AND WASTEWATER SERVICE

EAGLE RIVER
WATER & SANITATION
DISTRICT

APPENDIX D

STANDARD SPECIFICATIONS FOR SEWER MAINS

Last Approved Revision: March 23, 2023

private use should be avoided to the extent practicable. The standard easement width for all mains shall be a minimum of 20 feet. The main shall be generally centered within the easement. The easement width shall be in accordance with Standard Detail D-09.

2.4.2 Minimum Size

All mains shall be a minimum of eight inches (8") in diameter. All sewer service lines shall be a minimum of four inches (4") in diameter, Refer to Appendix B for Wastewater Service Line Construction Specifications.

2.4.3 Depth of Bury

In general, mains are to be sufficiently deep to receive wastewater from basements and to prevent freezing. The minimum cover above a main shall be four feet six inches (4'-6"). For every foot of cover that is out of compliance with minimum cover requirements, the District will require the installation of 1-inch of insulation board per Appendix E Section 1.14. The absolute minimum cover over a sewer main is 3'. Sewer service connections are not permitted in areas where there is less than 4'6" cover over the sewer main. In addition to maintaining cover from the ground surface, specified cover is required from storm sewer crossings and other cold air sources. Additional depth may be required to allow for adequate cover on service lines. The Applicant shall demonstrate that the pipe materials are suitable for the proposed depth of installation. Any main installation greater than ten feet (10') shall require an increased wall thickness. Any proposed main installation greater than 14 feet (14') shall require an alternatives analysis submittal and District approval.

The maximum depth for a sewer manhole is fourteen feet (14') and shall be measured from the top of rim to the downstream invert. Any proposed applications with manholes installed at a depth greater than fourteen feet (14') shall require an alternatives analysis submittal and District approval.

2.4.4 Main Insulation Requirements

For every foot of cover that is out of compliance with minimum cover requirements, the District will require the installation of 1-inch of insulation board per Appendix E Section 1.14. In addition to maintaining cover from the ground surface, specified cover is required from storm sewer crossings and other cold air sources.

2.4.5 Minimum Distance from Structures

All main extensions shall be installed at a minimum distance of ten feet (10') from all structures or at a one foot horizontal to one-foot vertical (1:1) ratio from the bottom of any structural element, whichever is greater. Encroachments of structures into

2.6.1 Cross Connections Prohibited

There shall be no physical connections between a public or private potable water supply system and a main or appurtenance thereto which would permit the passage of any wastewater or polluted water into the potable supply. No water pipe shall pass through or come into contact with any part of a sewer main or manhole. There shall be no physical connections between a stormwater conveyance system and a main or appurtenance thereto which would permit the passage of any storm water into the wastewater collection system. No stormwater water pipe shall pass through or come into contact with any part of a sewer main or manhole.

2.6.2 Relation to Water Works Structures

Minimum distances from public water supply wells or other water supply sources and structures shall be provided.

~~2.6.3 Horizontal and Vertical Separation from Potable Water Mains~~

~~Refer to detail D-11.~~

Add in new wording for parallel installations of Main, Services, and Appurtanaces

~~*(a) Parallel Main Installations and Appurtenances:*~~

~~Sewer mains and sewer service lines shall be installed at least ten feet (10') horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten foot (10') separation, the District may allow installation of the sewer main closer to a water main utilizing encasement or pressure rated joints, provided that the water main is on a separate trench or on an undisturbed earth shelf located on one side of the main and at an elevation so the bottom of the water main is at least eighteen inches (18") above the top of the sewer main. The District requires a ten-foot (10') separation between water and sewer appurtenances including manholes. If a manhole is installed, it will be measured from outside of manhole to outside of water attribute.~~

~~*(b) Perpendicular Crossings – Sewer under Water:*~~

~~If the sewer pipe crosses under the water main but less than eighteen inches (18") of clear space will exist, either the water main or sewer main must be installed with secondary containment. Acceptable options include a pipe casing extending no less than nine feet (9') each side of the crossing. The pipe casing shall be of watertight material with no joints. The casing pipe materials may be steel, ductile iron, fiberglass, fiberglass reinforced polymer mortar (FRPM), or polyvinylchloride (PVC) with suitable carrier pipe supports and casing pipe end seals. Alternatively, concrete or Controlled~~

~~Low Strength Material (ex. flowable fill) encasement of either pipe extending no less than ten feet (10') each side of the crossing may be used. To the extent possible, sewer must be encased as the first option.~~

~~*(c) Perpendicular Crossings – Water under Sewer:*~~

~~If the sewer pipe will cross above or over the water main, either the sewer pipe or water pipe shall be installed with secondary containment unless the vertical distance exceeds five feet (5'). Acceptable options include a pipe casing extending no less than 9- feet each side of the crossing. The casing must be a single section of steel or ductile iron pipe. The design must include a means to support the interceptor or sewer main to prevent settlement and permit maintenance of the water main without damage to the sewer pipe. Alternatively, concrete or Controlled Low Strength Material (ex. flowable fill) encasement of either pipe extending no less than 10-feet each side of the crossing may be used. Crossings involving jointless pipe such as HDPE, fusible PVE or welded steel do not require installation of secondary containment.~~

SECTION III – MATERIAL SPECIFICATIONS

3.1 General Requirements

All materials must conform to these Material Specifications and shall be new and undamaged.

Acceptance of materials, or the waiving of inspection thereof, shall in no way relieve the Applicant of the responsibility for furnishing materials that meet the requirements of these Specifications.

3.2 Pipe and Fittings

The following materials are approved for District mains:

3.2.1 Polyvinyl Chloride (PVC) gravity pipe

Main installations from eight to fifteen inches (8" to 15") in diameter shall conform to ASTM D3034 and shall be either SDR-35/PS46 or SDR-26/PS115.

Main installations from eighteen to twenty-seven inches (18" to 27") in diameter shall conform to ASTM F679 and shall be SDR-26/P115. Push on joints and molded rubber gaskets shall conform to ASTM D3212.

Maximum pipe segment lengths shall be twenty feet (20'). Joint lubricant shall be non-toxic and water-soluble and supplied by the pipe manufacturer.

3.2.2 Polyvinyl Chloride (PVC) pressure pipe

(a) Yelomine

Yelomine pipe shall be SDR-21, restrained joint PVC pressure pipe and fittings having a minimum cell classification of 12454 as defined in ASTM D1784 and materials in conformance with ASTM D2241.

(b) C-909~~900~~

AWWA C-909 Moleculary Oriented Polyvinyl Chloride (PVCO) pressure~~0~~ pipe may be used for 8 " through 12" diameter pipe, and shall be pressure class 235 psi, DR18, with push-on joints and flexible elastomeric seals ASTM D3139/ASTM F477. All spigot ends shall be beveled to manufacturer's specifications with gaskets meeting ASTM F477 and joints in compliance with ASTM D3139.

5.4 Television Inspection – General Requirements

Prior to construction/final acceptance of any sanitary sewer line by the District, the main shall be inspected internally by television as outlined in this Section. Leakage testing shall be performed prior to televising. The complete job is ready for television inspection when the following work has been completed.

(a) All sewer pipelines are installed and backfilled.

(b) All attributes are in place, all inverts are complete and pipelines are accessible.

(c) All other underground facilities, utility piping and conduits are installed.

(d) Pipelines have been jet cleaned.

(e) Final air test has been completed.

When the above work is complete, the Contractor shall arrange for the television inspection. The Contractor of the project will notify the District in writing as to the scheduled date of the television inspection.

After conditions a through e as outlined above, are met, the entire job will be televised.

(a) A video. accompanied by Standard Form 6.3 shall document defects requiring correction.

(b) If no deficiencies are observed, the work will be considered satisfactory.

There is no acceptance tolerance for defects such as high and low spots (sags), joint separations, offset joints, chipped ends, cracked or damaged pipe, dimples or bumps in the pipe, or groundwater infiltration.

5.4.1 Inspection Format

Sanitary sewer lines shall be inspected by means of remote CCTV. All CCTV work shall conform to current NASSCO-PACP standards. Contractor shall provide the District with CCTV inspections (video and data collected) entirely in electronic format. Mains shall be tested with three and a half (3.5) gallons of water per minute flowing during televising and shall follow the direction of flow. The camera must be centered in the pipe and the speed of travel shall be slow enough to inspect each pipe joint, and tee connection, and should not, at any time, be faster than 30 feet per minute. The documentation of the work shall consist of PACP CCTV Reports, PACP database, logs, electronic reports, etc. noting important features encountered during the inspection. All CCTV video observations shall be identified by audio and recorded on the District Standard Form D3 and is required to accompany each submittal.

the District's Inspector. The plug shall be a mechanical-type device and is to be secured to the existing manhole to prevent loss of plug. The plug shall not be removed until Construction Acceptance has occurred.

The Contractor shall be required to make routine inspections of the mechanical plug to ensure that no leaking is occurring. If a leak is found, the Contractor shall immediately notify the District and take corrective action.

The District may perform a video inspection of existing sewer mains that could potentially be impacted by construction activities prior to the start of construction and \ after the completion of construction. Any damage to existing facilities caused by the Contractor shall be repaired at the Contractor's expense.

5.7 Manhole Abandonment

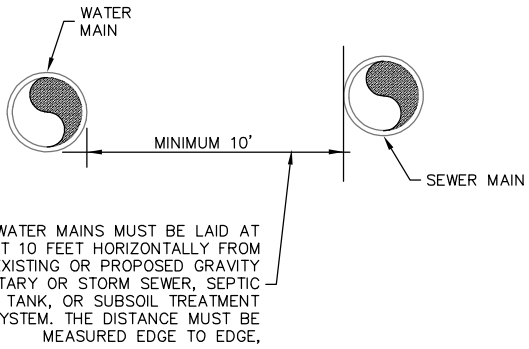
Manholes to be abandoned in place shall have all pipes entering or exiting the structure plugged with lean concrete or controlled low strength material backfill (Flo-Fill) or a CIPP plug. For manholes with existing pipes too large to plug with fill, a bulkhead shall be constructed on the inside of the manhole to prevent the fill from entering the pipes Manhole tops or cone section shall be removed to the top of the full barrel diameter section or to a point not less than twenty four~~eighteen~~ (24 ~~24?~~) inches below final grade. The structure shall then be backfilled with lean concrete, ~~and~~ Flo-Fill, screened rock, sand or other uniformly graded material~~-~~. Surface restoration shall be completed to match the surrounding areas.

5.8 Sewer Main Abandonment

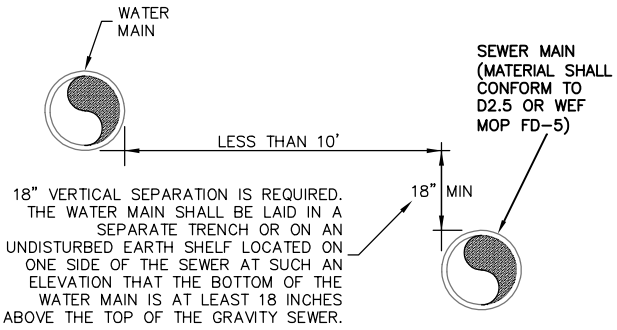
When abandoning a sewer main completely there must be watertight plugs installed on both ends of the sewer main.

5.8.1 Sewer Main With Manhole Connection Abandonment

When abandoning a sewer main that is connected to a manhole a watertight plug shall installed on the end of the main not within the manhole and a CIPP plug shall be installed on the inlet within the manhole. When an inlet is abandoned the manhole channel must be re-benched.

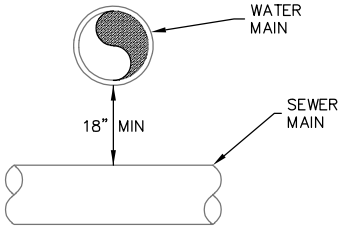


REQUIRED SEPARATION FOR PARALLEL INSTALLATIONS



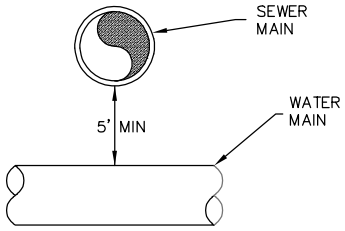
EXCEPTION–REQUIRED SEPARATION FOR PARALLEL INSTALLATION CAN NOT BE ACHIEVED

WATER MAINS CROSSING SEWERS MUST BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS MUST BE THE CASE WHERE THE WATER MAIN IS ABOVE THE SEWER (THIS IS PREFERRED).

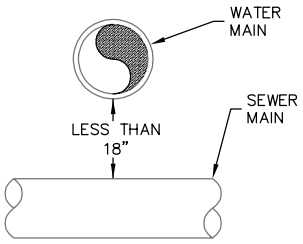


REQUIRED SEPARATION FOR PERPENDICULAR INSTALLATIONS (WATER ABOVE SEWER)

SEWERS CROSSING OVER WATER MAINS MUST BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 5' BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS MUST BE THE CASE WHERE THE SEWER IS ABOVE THE WATER MAIN.

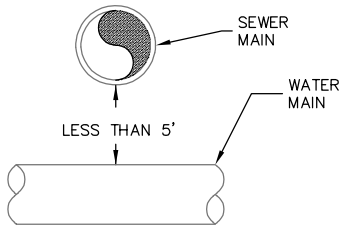


REQUIRED SEPARATION FOR PERPENDICULAR INSTALLATIONS (SEWER ABOVE WATER)



INSTALL SECONDARY CONTAINMENT ON EITHER THE WATER OR SEWER MAIN. PIPE CASING EXTENDING NO LESS THAN 9–FEET EACH SIDE OF THE CROSSING OR CONCRETE/CONTROLLED LOW STRENGTH MATERIAL (EX. FLOWABLE FILL) ENCASEMENT EXTENDING NO LESS THAN 10–FEET EACH SIDE OF THE CROSSING MAY BE USED. SEE GENERAL NOTE 3.

EXCEPTION A– SEWER UNDER WATER– REQUIRED SEPARATION FOR PERPENDICULAR INSTALLATION CANNOT BE ACHIEVED



INSTALL SECONDARY CONTAINMENT ON THE WATER MAIN. PIPE CASING EXTENDING NO LESS THAN 9–FEET EACH SIDE OF THE CROSSING OR CONCRETE/CONTROLLED LOW STRENGTH MATERIAL (EX. FLOWABLE FILL) ENCASEMENT EXTENDING NO LESS THAN 10–FEET EACH SIDE OF THE CROSSING MAY BE USED. SEE GENERAL NOTE 4.

EXCEPTION B– SEWER OVER WATER– REQUIRED SEPARATION FOR PERPENDICULAR INSTALLATION CANNOT BE ACHIEVED

GENERAL NOTES

1. WATER PIPES MUST NOT PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER MANHOLE. WATER MAIN SHOULD BE LOCATED AT LEAST 10 FEET FROM SEWER MANHOLES.
2. PIPE SEPARATION MUST COMPLY WITH STATE OF COLORADO DESIGN CRITERIA FOR POTABLE WATER SYSTEMS, SECTION 8.8 (ALL DETAILS REGARDING SEPARATION BETWEEN WATER AND SEWER).
3. SECONDARY CONTAINMENT–THE PIPE CASING MUST BE OF WATERTIGHT MATERIAL WITH NO JOINTS. THE CASING PIPE MATERIALS MAY BE STEEL, DUCTILE IRON, FIBERGLASS, FIBERGLASS REINFORCED POLYMER MORTAR (FRPM), OR POLYVINYLCHLORIDE (PVC) WITH SUITABLE CARRIER PIPE SUPPORTS AND CASING PIPE END SEALS.
4. SECONDARY CONTAINMENT REQUIRED UNLESS THE VERTICAL DISTANCE EXCEEDS 5 FEET. THE CASING MUST BE A SINGLE SECTION OF STEEL OR DUCTILE IRON PIPE. THE DESIGN MUST INCLUDE A MEANS TO SUPPORT THE INTERCEPTOR OR SEWER MAIN TO PREVENT SETTLEMENT AND PERMIT MAINTENANCE OF THE WATER MAIN WITHOUT DAMAGE TO THE SEWER PIPE. CROSSINGS INVOLVING JOINTLESS PIPE SUCH AS HDPE, FUSIBLE PVC OR WELDED STEEL DO NOT REQUIRE INSTALLATION OF SECONDARY CONTAINMENT.

EAGLE RIVER WATER & SANITATION DISTRICT
846 FOREST ROAD
VAIL, CO 81657
(970) 476–7480
WWW.ERWSD.ORG

WATER & SANITARY SEWER SEPARATION

DRAWN BY:	JEC	DATE:	03/01/2017
SCALE:	NONE	REV:	N/A

D–11

RULES AND REGULATIONS
FOR
WATER AND WASTEWATER SERVICE

EAGLE RIVER
WATER & SANITATION
DISTRICT

APPENDIX F

POLLUTANT DISCHARGE REGULATIONS AND INDUSTRIAL PRETREATMENT PROGRAM

Last Approved : February 25, 2021

SECTION I - GENERAL

1.1 Purpose and Policy

This regulation sets forth uniform requirements for all Users of the Sanitary Sewer System for the Eagle River Water & Sanitation District (District) and enables the District to implement and enforce an effective Industrial Pretreatment Program and to comply with its Colorado Discharge Permit System (CDPS) permit requirements. This regulation shall apply to all Users of the Sanitary Sewer System. The objectives of this regulation are:

(a) To prevent the introduction of pollutants into the Sanitary Sewer System that will Interfere with its operation;

(b) To prevent the introduction of pollutants into the Sanitary Sewer System that will pass through the Wastewater Treatment Plant, inadequately treated, into receiving waters, or otherwise be incompatible with the Wastewater Treatment Plant;

(c) To protect both District personnel who may be affected by wastewater and sludge in the course of their employment and the general public; and

(d) To promote reuse and recycling of industrial wastewater and sludge.

1.2 Administration

Except as otherwise provided herein, the General Manager shall administer, implement, and enforce the provisions of these regulations. Any powers granted to or duties imposed upon the General Manager may be delegated by the General Manager to other District personnel.

SECTION XI – CONTROL PROGRAMS

11

11.1 Authority

The District may establish specific control programs for all Users of the Sanitary Sewer System to control specific pollutants as necessary to meet the objectives of the District Pollutant Discharge Regulations and Industrial Pretreatment Program. Pollutants subject to these control programs shall generally be controlled using Best Management Practices (BMPs).

The District may implement these Control Programs through a Wastewater Discharge Permit, an authorization to discharge, by formal notification, or by enforcing these Pollutant Discharge Regulations and Industrial Pretreatment Program requirements directly. All Sanitary Sewer System users that are covered by these Control Programs shall comply with this Section, whether specifically notified by the District to do so.

11.2 Enforcement and Compliance

These requirements form a part of the Pollutant Discharge Regulations and Industrial Pretreatment Program. Enforcement of this regulation is governed by the express terms in the Pollutant Discharge Regulations and Industrial Pretreatment Program**.** All Users of the Sanitary Sewer System are required by Article III, Section 3.2 of the District Rules and Regulations for Water and Wastewater Service to comply with the Pollutant Discharge Regulations and Industrial Pretreatment Program.

11.3 Fats, Oils, and Grease Control Program

The purpose of the Fats, Oils, and Grease (FOG) Control Program is to provide specific guidance for Users of the District Sanitary Sewer System to understand and comply with the District Pollutant Discharge Regulations and Industrial Pretreatment Program.

The FOG control program utilizes Best Management Practices (BMPs) which establish requirements for any User that has the potential to discharge FOG to the Sanitary Sewer System. The requirements established in this BMP shall apply to facilities where preparation, manufacturing, processing of food or washing/sanitizing of dishes or equipment occurs. Food Service Establishments (FSEs) may include, but are not limited to, restaurants, cafeterias, cafes, fast food outlets, pizza outlets, sandwich shops, coffee shops, schools, nursing homes and other facilities that prepare, service or otherwise make food available for consumption.

(a) These facilities shall install and maintain a Gravity Grease Interceptor (GGI) within ninety (90) days of being notified of such requirement. A food service establishment shall install and properly operate and maintain a Gravity Grease

Interceptor, implement all required BMPs and not violate a General or Specific Prohibitions as specified in Section 2.1 of the Pollutant Discharge Regulations and Industrial Pretreatment Program.

(b) A GGI that was legally and properly installed at an industrial user's facility prior to the effective date of these District Pollutant Discharge Regulations and Industrial Pretreatment Program shall be acceptable as an alternative if such device is effective in removing floatable and settleable material and is designed and installed is such a manner that it can be inspected and properly maintained. If the Manager determines at any time that such GGI is incapable of adequately retaining the floatable and settleable material or if it was installed in such a manner that it cannot be inspected and properly maintained, the industrial user shall install a GGI that complies with all District codes within ninety (90) days after being notified of such requirement.

(c) The User may be required by the District to install a control manhole as specified by the District and as authorized in Article VI, Section 6.10.6 of the District Rules and Regulations for Water and Wastewater Service.

11.4 Control Requirements

(a) A GGI shall be required for the proper handling of liquid wastes which may be harmful to, or cause obstruction in the wastewater collection system or cause or contribute to Pass Through or Interference. The District shall have the right to set up on the User's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the User's operations

(b) It shall be the responsibility of the industrial user and/or owner of the property to contact the District for the purpose of obtaining necessary permits for the installation of a grease removal device or any modifications to the facility's plumbing. Written approval from the District must be obtained prior to installation of the grease interceptor. The time of review and approval of such permits shall in no way relieve the industrial user from the responsibility of producing a discharge acceptable to the District under the provisions of the District Pollutant Discharge Regulations and Industrial Pretreatment Program.

(c) The design and sizing of GGIs at a minimum, shall be in accordance with the most recently adopted State of Colorado Plumbing Code. The GGI shall be designed, sized ,installed, maintained and operated so as to accomplish the intended purpose of intercepting pollutants from the User's wastewater and preventing the discharge of such pollutants to the District's wastewater collection system, including pollutants that result in toxic, noxious or malodorous conditions that create a public nuisance or unsafe working conditions, which endanger life or the environment.

(d) Upon change of ownership of any existing facility which would be required to have an interceptor under the District Pollutant Discharge Regulations and

Industrial Pretreatment Program, the applicant for sewer service shall have the burden to demonstrate that a properly sized and functioning GGI is installed.

(e) All sinks which are connected to a GGI shall be equipped with a fixed or removable mesh or screen which shall catch garbage and food debris and prevent it from entering the GGI.

(f) The User must ensure interceptors are easily accessible for inspection, cleaning, and removal of FOG.

(g) The User must maintain interceptors at their expense and keep in efficient operating condition at all times by the regular removal of accumulated FOG.

(h) Each facility that is required to use and maintain a GGI shall keep a record of every time the GGI is pumped, cleaned or repaired. This record shall include the date, the name of the company that pumped or cleaned the GGI and the amount of waste that was removed. Such records shall be made available to the District upon request. The removed contents from any GGI shall be handled by a person licensed to haul such waste and shall be disposed of in accordance with federal, state and local regulations.

11.5 Required Maintenance

(i) A GGI shall be required for the proper handling of liquid wastes which may be harmful to, or cause obstruction in the wastewater collection system or cause or contribute to Pass Through or Interference. The District shall have the right to set up on the User's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the User's operations

(j) GGIs shall be maintained by regularly scheduled cleaning so that they will properly operate as intended to efficiently intercept the fats, oil and grease from the facility's wastewater and prevent the discharge of said materials into the District's wastewater collection system. A GGI shall be serviced at a minimum of every ninety (90) days, whenever the combined thickness of the floating greases and settled solids is greater than 25% of the hydraulic working capacity of the GGI, or if toxic, noxious, malodorous conditions create a public nuisance or unsafe working conditions which endanger health.

(k) The District may require more frequent cleaning than that prescribed in paragraph 11.5 (a) above. A variance from the requirement in paragraph 11.5 (a) may be obtained if the User can demonstrate through analytical data that less frequent cleaning is sufficient.

(l) Maintenance of grease interceptors shall be done in a workman-like manner only by a business/professional normally engaged in the servicing of such devices. The District requires that the GGI be fully pumped and all contents removed. The waste hauler picking up the grease shall be licensed. The District may request pre-notification of pumping or repair of a GGI to allow the District to be onsite.

(m)In the event a GGI is not properly maintained by the User, owner, lessee, or other authorized representative of the facility, the District may authorize such maintenance work be performed on behalf of the property owner. The costs of such maintenance shall be billed directly to the property owner and shall become part of the charges due and owing to the District. The District may require more frequent cleaning than that prescribed in paragraph 11.5 (a) above. A variance from the requirement in paragraph 11.5 (a) may be obtained if the User can demonstrate through analytical data that less frequent cleaning is sufficient.

(n) Biological treatment or enzyme treatment shall not be a substitute for the servicing of a GGI. Use of enzymes or other chemical or biological 33 treatment or product that emulsifies or acts to emulsify FOG is prohibited

(o) The User must document each pump-out with a waste manifest or trip ticket and kept by the User onsite for at least three (3) years. Copies of all hauling manifests must be provided to the District within 30 days of pumping. Failure of a Customer to permit such inspections, observations, measurements, samplings, testing, or inspection of records upon the request, in writing, of the General Manager may result in a finding that permission is being denied to avoid discovery of a violation of these Rules and Regulations. Such finding may result in the disconnection of service or other remedies as allowed under these Rules and Regulations. Refer to Article III, Violator's Liability.

RULES AND REGULATIONS
FOR
WATER AND WASTEWATER SERVICE

EAGLE RIVER
WATER & SANITATION
DISTRICT

APPENDIX G

BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL (BPCCC) PROGRAM

Last Approved: February 25, 2021

b. Dry fire systems shall have an approved double check valve installed upstream of the air pressure valve.

c. All multi-family cross connections will be controlled using a containment assembly or method.

d. All premises with irrigation that is separate from the domestic water system must have an RPZ assembly.

2.3 Installation

a. Refer to the meter assembly and vault diagrams located in Appendix B of these rules and regulations (Water and Wastewater Service Line Construction) for proper configuration.

b. Backflow prevention assemblies shall be installed in accordance with instructions and approved designs. Reduced Pressure Backflow Preventers shall not be installed directly above the water meter to prevent the relief port from dumping water onto the meter.

c. All backflow assemblies must be testable.

d. All backflow assemblies and methods shall be installed in the horizontal position. Assemblies manufactured and identified for other alignments may be installed if such installations are in accordance with the design and approved by the District. Access and clearance shall be provided for the required testing, maintenance, and repair. Access and clearance shall require a minimum of one foot between the lowest portion of the assembly and grade, floor, or platform. Elevated installations exceeding five feet above the floor or grade shall be provided with a permanent platform capable of supporting a tester or maintenance person.

e. A pressure type vacuum breaker shall not be used where the assembly will be subjected to back pressure and shall be installed a minimum of 12 inches above the highest piping or outlet downstream of the assembly in a manner to preclude back pressure, but no higher than 60 inches above ground level.

f. An atmospheric non-pressure type vacuum breaker shall be used only where:
   i. The assembly is never subjected to more than 12 hours continuous pressure;
   ii. The assembly is installed with the air inlet in a level position and a minimum of six inches above the highest piping or outlet it is protecting; and
   iii. No valves are installed downstream of atmospheric non-pressure type vacuum breakers.

g. A single or a dual check valve shall not be considered to be a backflow prevention assembly.

Engineer's Resources

ERWSD Main Water Plan Notes

1. All water line construction is subject to the most recently adopted ERWSD Rules and Regulations.
2. All water mains shall be a minimum of 8 inches in diameter, with the exception of fire hydrant laterals.
3. All water mains shall be installed with a minimum of 7 feet of cover to top of pipe and a maximum of 9.5 feet cover to top of pipe.
4. Pipe deflections shall not exceed pipe manufacturers maximum allowable deflection or exceed the values in Appendix C- 2.6.9 Table C-1.
5. All DIP water mains must be encased in PE Wrap per Article C-3.2.9
6. All water mains must have tracer wire meeting ERWSD requirements per Appendix E-1.12
7. Water specific marking tape shall be installed 24 inches above the water main.
8. All water mains shall be bedded per Appendix E, Detail E-01.
9. All water mains that run parallel to sanitary sewer shall be installed a minimum of 10 feet away horizontally.
10. All water mains must be tested in accordance with ERWSD Rules and Regulations Article 9.3.3.

ERWSD Water Service Plan Notes

1. All water line construction is subject to the most recently adopted ERWSD Rules and Regulations.
2. Each individually meter unit must have its own independent water service.
3. All residential water service lines should be 1 inch, 1.5 inch or 2 inch, shall be designed to not exceed a velocity of 10 ft/sec and shall be approved by the District Plan Review Engineer.
4. All water services shall be constructed along the shortest and straightest route possible.
5. All water service taps shall be a minimum of 18 inches apart.
6. Prior to a new tap, any and all existing stub outs shall be abandoned per Appendix B-2.11.
7. All water service lines that are 1 inch through 2 inch shall be copper or polyethylene and all water service lines 4 inches or greater shall be ductile iron. All material must meet the requirements in Appendix -B 2.1
8. All water service curb stops shall be located within 1 foot of the property line, edge of ROW or edge of easement.
9. All water services shall be installed with a minimum of 7 feet of cover to the top of pipe and a maximum of 9.5 feet of cover to the top of the pipe.
10. All water service lines must be installed with tracer wire meeting ERWSD requirement per Appendix E-1.12.
11. All water services that run parallel to sanitary or storm sewer shall be installed a minimum of 10 feet horizontally away.
12. At all crossings with sewer pipes refer to Appendix B section XX for requirements.

ERWSD Sanitary Sewer Construction Notes

1. All sanitary sewer construction is subject to the most recently adopted ERWSD Rules and Regulations.
2. All sanitary sewer mains shall be a minimum of 8 inches in diameter.
3. All sanitary sewer mains shall be installed with a minimum of 4.5 feet of cover to top of pipe and a maximum of 14 feet of cover to top of pipe.
4. All sanitary sewers must have tracer wire per Appendix E1.12 to be installed.
5. All sanitary sewers shall be bedded per Appendix E, Detail E-01.
6. All sanitary sewers shall be installed a minimum of 10 feet away horizontally from domestic water.
7. All sanitary sewers must be tested in accordance with ERWSD Rules and Regulations Article 9.3.3.

ERWSD Sanitary Sewer Service Plan Notes

1. All sanitary sewer service line construction is subject to the most recently adopted ERWSD Rules and Regulations.
2. Each individually meter unit must have its own independent sanitary sewer service.
3. All sanitary sewer services shall be constructed along the shortest and straightest route possible.
4. All sanitary sewer service lines shall have a clean out within 3 feet of the structure, every 100 feet, and at every change of direction greater than 45 degrees.
5. Sanitary sewer service clean outs shall be placed outside of the ROW whenever possible.
6. All sanitary sewer service taps shall be a minimum of 18 inches apart.
7. All Sanitary sewer service taps shall be connected no closer than 10 feet outside of a manhole with a wye connection.
8. All sanitary sewer service lines shall be PVC. All materials must meet the requirements in Appendix B 3.1.
9. All sanitary sewer services shall be installed with a minimum of 4.5 feet of cover to the top of pipe and a maximum of 13 feet of cover to the top of pipe.
10. All sanitary sewer service lines must be installed with tracer wire meeting ERWSD requirement per Appendix E 1.12.
11. All sanitary sewer services that run parallel to potable water shall be installed a minimum of 10 feet away horizontally.
12. At all crossings with potable water pipes refer to Appendix B section XX for requirements.

As-Built Requirements.

- All right of ways shown (Including adjacent right of ways)
    - Labeled with eagle county recording information.
- Easements
    - Labeled with eagle county recording information.
    -
- Property Boundaries
    - Labeled with eagle county recording information.
- # different drawings (water, sewer, easements)

Water

- Water Mains
    - Diameter
    - Length
    - Material
    - Insulation (if applicable)
    - Private or Public
- Water Services
    - Diameter
    - Length
    - Material
    - Insulation (if applicable)
- Fittings
    - Diameter
    - Material
    - Type
    - XYZ State Planes Coordinate
- Thrust Blocks
    - Size
- Fire Hydrants
    - Type
    - Flange Elevation
    - Lateral Invert Elevation
    - XY State Planes Coordinate
    - Extensions (if applicable)
    - Private or Public
- Valves (including curb stops)
    - Size
    - Type
    - X,Y,Z State Planes Coordinate
- Vaults and other appurtenances
    - Vault information
    - Type

    - Lid X,Y,Z State Planes Coordinate
    - Extent of below grade structure
- Existing Water Mains and Existing Water Services
    - Shown and labeled as “existing”
- Crossings
    - Storm Crossings
        - Location
    - Other Utility Crossings
        - Location
- Details
    - Include all appurtenant details

Wastewater

- Sewer Mains
    - Diameter
    - Length
    - Slope
    - Material
    - Insulation (if applicable)
    - Secondary Containment (if applicable)
    - Private or Public
- Sewer Services
    - Diameter
    - Length
    - Material
    - Insulation (if applicable)
    - Tap location (X,Y,Z state planes Coordinate)
    - Cleanouts X,Y State Planes Coordinate
    - Stub Out Distal End X,Y,Z State Planes Coordinate
- Manholes
    - Diameter
    - Type
    - Rim Elevation
    - Invert Elevations
    - X,Y State Planes Coordinate
- Crossings
    - Storm Crossings
        - Location
    - Other Utility Crossings
        - Location
- Details
    - Include appurtenant details
- FOG Entities
    - Grease Interceptor
        - Size
        - X,Y State Planes Coordinates
    - Inspection Pit
        - X,Y State Planes Coordinates
        - Rim Elevation
        - Invert Elevations
    - Service Line
        - Diameter

- Length
- Material
- Cleanouts

Overall Notes

- Abandoned Water and/or Wastewater System infrastructure.
  - greyed out
  - labeled as “abandoned in place” or “abandoned and removed”
  - date of abandonment
  - pipe material

    *Details shall be included where abandoned mains or services are within a 20-foot radius of any water system valves

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

BOARD COMMITTEES

DISTRICT

Audit/Budget	Dick Cleveland Steve Coyer *Sarah Smith Hymes
Employee Housing	Steve Coyer Rick Pylman *Robert Warner, Jr.
Retirement Plans	Robert Warner, Jr. Siri Roman David Norris *Dick Cleveland
Organizational Development	Robert Warner, Jr. Dick Cleveland *Timm Paxson
Water Quality	Sarah Smith Hymes Timm Paxson *Steve Coyer

AUTHORITY

Audit/Budget	Geoff Dreyer George Gregory *Joanna Kerwin

JOINT

Rules and Regulations	Kim Bell Williams (A) Robert Warner, Jr. (D) *George Gregory (A) *Rick Pylman (D)
Water Conservation	Kevin Hillgren (A) Tamra Underwood (A) Kate Burchenal (D) Steve Coyer (D) *Geoff Dreyer (A) *Sarah Smith Hymes (D)

(A) = Authority, (D) = District

**Backup committee member*
(serves in the absence of a primary member)

Return to agenda

UPPER EAGLE REGIONAL WATER AUTHORITY

2024 UERWA CONTRACT LOG

Contract No.	Date Executed	Change Order Signed On	Project Name	Contractor	Contract Amt.	Project Mgr.	Account No.	Status / Description
24.20.001	Bid Process		Arrowhead Transmission Main and Valve Vault	In Bid Process	In Bid Process	M. Mantua	To Be Determined	Water main and valve vault installation, connections to existing mains, disinfection and testing of new system, full site restoration, and other work associated with placing the new system in service.
24.20.002	Pending		UERWA WST Roof Rehabilitation and Access Hatch Improvements	Structural Preservation Systems, LLC	$99,995.00	D. Duerr	20.1.2.00.00.043	Berry Creek WST concrete repair, Beaver Creek Tank 2 concrete repair, Edwards WST hatch replacement.
24.15.009	Pending		Bolts Lake Program Manager Services	Black & Veatch Corporation	To Be Determined	J. Hildreth	10.3.2.20.09.136 & 20.1.2.00.00.136	Program Manager services to assist to the development of the Bolts Lake Reservoir Project. Joint contract with ERWSD.

Return to agenda

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: Authority Board

FROM: Jim Cannava, Finance Manager

DATE: Feb. 14, 2024

RE: UERWA Bond Issue Update

I am pleased to inform you that the bond pricing and closing procedures have been successfully completed, and the Authority has been funded accordingly. Here is a brief overview of the key highlights.

Pricing: The Piper Sandler underwriting team demonstrated exceptional skill in marketing and pricing the bonds. Despite encountering some turbulence in the bond market attributed to lower-than-expected jobless claims, the Authority managed to improve the pre-pricing spread against the municipal bond market benchmark. Notably, significant enhancements were achieved in the pricing of long-term bonds, reflecting the team's proficiency in optimizing the offering amidst market challenges.

Insurance: Bond Insurance and Bond Surety Policies were secured. These policies reduce the average annual debt service by approximately $100,000. The bond insurance improves the Authority's rating, resulting in improved pricing. The surety policy reduces the need to fund the required reserve fund with bond proceeds, reducing the premium and the annual debt service.

Closing: The closing process progressed as planned, and the Authority received $22,000,000 into the project fund on January 30th, adhering to the predetermined timeline.

Rate Impact: We propose introducing a new 2024 Debt Service Rate of $7.24 in the 2025 rate package. This rate aims to generate an annual revenue of $1,511,414, equivalent to the annual debt service of $1,374,013 plus a 10% margin. Notably, the annual debt service came in significantly below the $1,800,000 approved cap.

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

MEMORANDUM

TO: Boards of Directors

FROM: Allison Ebbets, Water Conservation Supervisor

DATE: February 22, 2024

RE: Water Conservation Program Update

The District currently uses six account types to bill customers for their water use: Individually Metered Residential, Irrigation Only, Commercial, Multi-Family, Mixed Use, and Municipal. In 2023 staff evaluated and re-designed rates for two of the six account types (Individually Metered Residential and Irrigation Only accounts); these new rates were implemented for customers in beginning with the January 2024 bill. As planned, the Water Conservation and Finance teams initiated the rate redesign process for the remaining four account types in early February 2024 (Commercial, Multi-Family, Mixed Use, and Municipal).

Account Type	Rate Redesign Year
Individually Metered Residential	2023, implemented 2024
Irrigation Only	
Commercial	2024, to be implemented 2025
Multi-Family	
Mixed Use	
Municipal	

Staff are using the same approach developed for the rates redesigned in 2023 for the remaining four account types, the goal is to implement changes for all four account types in 2025. This effort will be the primary focus for Water Conservation and Finance staff in the first half of 2024. The first phase of work includes compiling data, evaluating use patterns from the past 5 years, developing the analysis framework, and researching best practice rate structures for each of the four account types in this years' rate redesign. Staff plan to present to the boards at the May 2024 meetings, and a tentative future presentation at the June 2024 meetings. Please see below for a more detailed tentative schedule.

Tentative Schedule Presentation	Timing
Senior Leadership	Early April, 2024
Water Conservation Subcommittee (first look)	Mid April 2024
Water Conservation Subcommittee (second look, approval to present to the boards)	Early May 2024
Board Presentation 1 (first look)	May 23, 2024
Board Presentation 2 (second look)	June 27, 2024
Implementation	January 2025

Return to agenda

EAGLE RIVER WATER & SANITATION DISTRICT

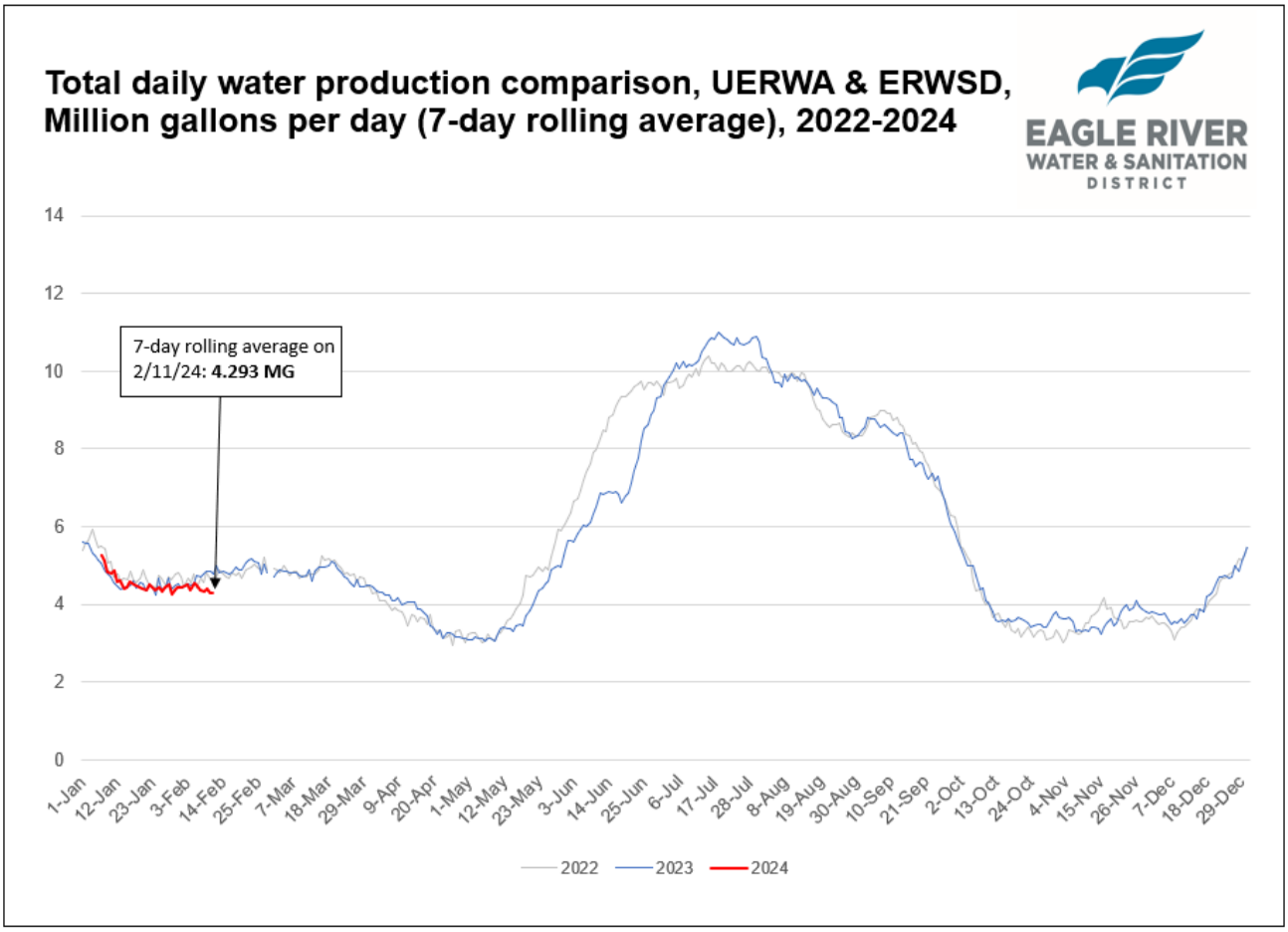
UPPER EAGLE REGIONAL WATER AUTHORITY

OPERATIONS MONTHLY REPORT
FEBRUARY 2024

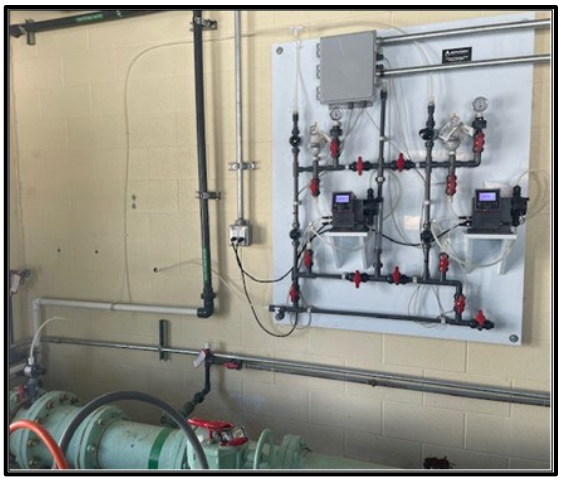
WATER

Kailey Rosema

The system-wide water production comparison was updated through Feb. 11. Production is normal for this time of year.



The installation of a backup chlorination feed system at the Berry Creek Wellhouse has been completed. The backup system provides disinfection process redundancy for this critical production facility. The project, which included design, regulatory permitting, controls integration, and equipment installation, was completed entirely in-house.



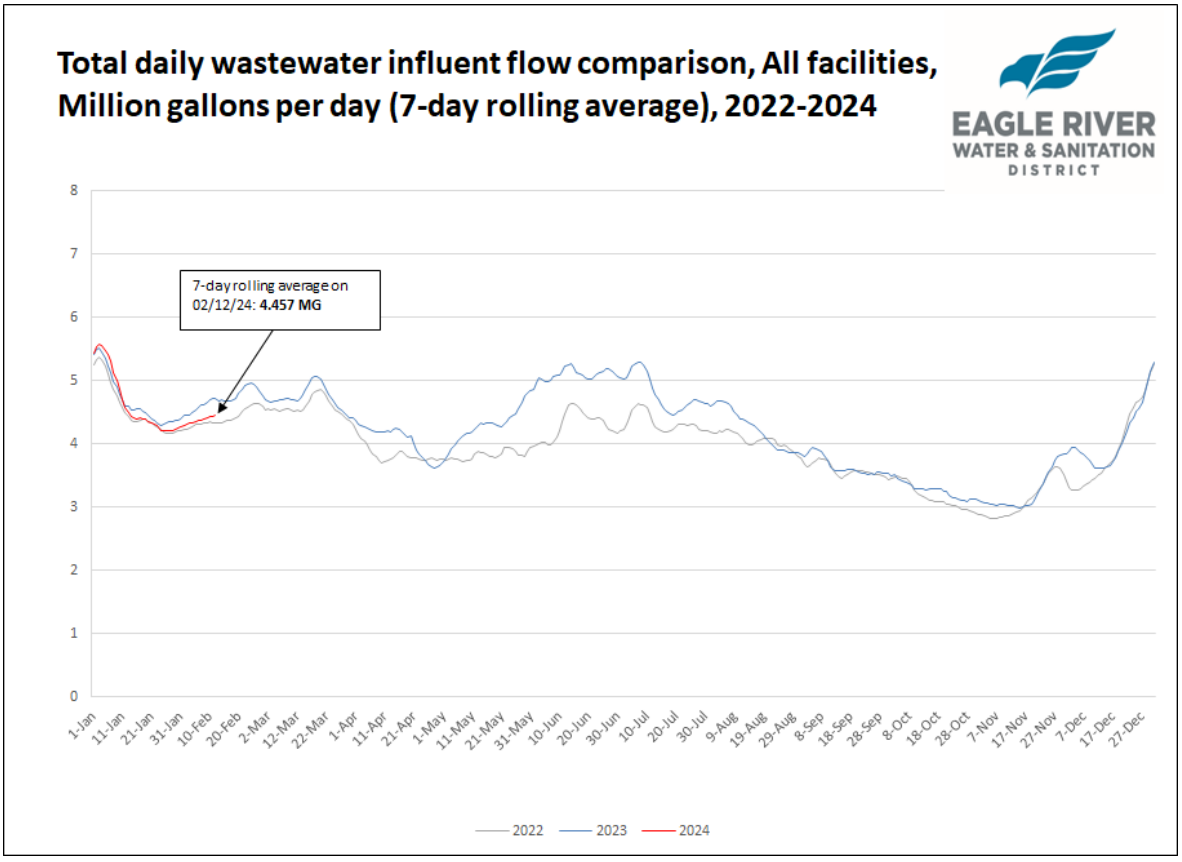
New backup chlorination feed panel at Berry Creek Wellhouse

Vail Well R7, which experienced major damage during a utility power failure on Jan. 4, is scheduled to be operational by the end of March. The repair schedule was extended due to complications that arose during installation of the replacement motor. The Water and OTS teams are in the process of procuring, installing, and testing additional equipment that must be replaced.

WASTEWATER

Chris Giesting

Cumulative influent wastewater flow and organic loading are normal for this time of year.



FIELD OPERATIONS

Niko Nemcanin

On Jan. 6, the Field Operations crews received a report of an odor complaint at a sewer manhole near Colorow Creek in Cordillera (note that Colorow Creek was previously named Squaw Creek and the name was recently changed). Crews arrived onsite, verified an active Sanitary Sewer Overflow (SSO) at the manhole, successfully dislodged the obstruction, and stopped the overflow. The cause of the SSO was determined to be a blockage in the collection main caused by a combination of grit, disposable wipes, and rags. Operators jetted and video-inspected the collection main to verify that there were no additional obstructions in the pipe or pipe damage that may have also contributed to the overflow. District staff notified CDPHE immediately upon discovering the release and the incident report was submitted within the required 5-day deadline. To prevent future SSOs in this area, the Field Operations team has increased the inspection and cleaning schedule for the affected manholes and collection pipe.

Water quality sampling in Colorow Creek (left) and Eagle River (right) after the SSO

Site after cleanup and disinfection

On Jan. 7, Field Operations staff repaired a water main leak near 4,200 Cresta Rd. in Arrowhead. The source of the leak was a hole near an improperly seated pipe joint. The damaged pipe was removed and replaced.

Arrowhead water main repair (damaged pipe on left; restored site on right)

On Jan. 17, Field Operations staff repaired a water main leak near the intersection of E. Wildridge Rd. and Flat Point in Wildridge. The leak was near a tee fitting in the distribution main. The damaged pipe and fitting were replaced, and a new isolation valve was installed.

Wildridge water main repair (damaged pipe on left; new pipe and isolation valve on right)

On Jan. 24, Field Operations staff repaired a water main leak on Avondale Ln. in Beaver Creek. The leak was caused by the failure of an old repair clamp. The failed repair clamp was removed and the damaged pipe was replaced.

Beaver Creek water main repair (damaged pipe and failed repair clamp on left; pipe repair on right)

On Jan. 26, Field Operations staff repaired a water main leak near Bear Paw Lodge in Bachelor Gulch. The leak was near an improperly deflected pipe joint in the distribution main. The damaged pipe joint was removed and replaced.

Bachelor Gulch water main repair (excavation on left; pipe repair on right)

On Jan. 31, Field Operations staff repaired a water main leak near the intersection of upper Matterhorn Circle and Geneva Dr. in west Vail. The leak was caused by a circumferential break in the main. The damaged pipe was removed and replaced.

Matterhorn Circle water main repair (excavation left; pipe damage center, repair right)

On Jan. 31, Field Operations repaired a water service connection near Saddle Ridge Loop in Cordillera. The service stub out had not been properly connected to the water main when the main was originally installed. The service pipe was extended and properly connected to the main.

On Feb. 6 and Feb. 8, Field Operations staff repaired two water main leaks near Alta Circle in west Vail. Both leaks were caused by circumferential cracks in the main. The damaged pipe sections were removed and replaced. The excavations were slow and complex because the repairs had to be made within a narrow easement in between established residential properties, there were overhead high voltage power lines immediately above the site, and several large trees had to be removed within the easement to allow for safe excavation.

Damaged pipe and leak location

Field crew correlating leak location

Tree removal

De-energizing power line

Completed repair

Alta Circle water main repairs

UTILITY SERVICES

Shane Swartwout

Meter Services

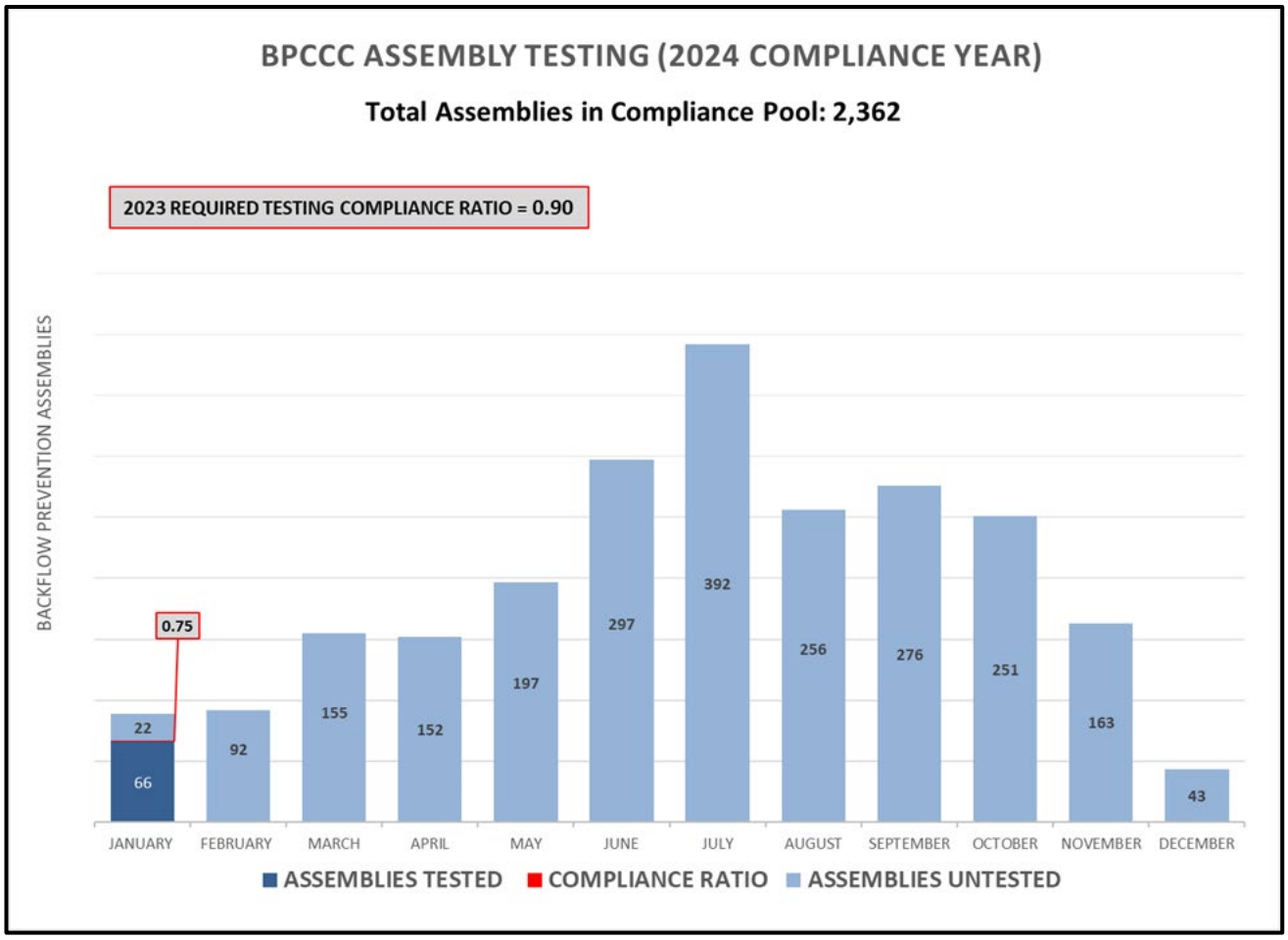
The Meter Services team continues to work towards 100% AMI conversion in the Authority. A progress report is provided below.

Report Date:	2/13/2024		
AMI SYSTEM STATUS	**ERWSD**	**UERWA**	**TOTAL**
(1) Total No. of Meters	3200	6865	10065
(2) No. of AMI Meters	3200	6365	9565
(3) System Percentage of AMI Meters	100%	93%	96%
Meters Remaining to Reach 100% AMI	**0**	**500**	**500**

Meter Services – Advanced Metering Infrastructure (AMI) Status (Updated 2-13-2024)

BPCCC Program

The BPCCC team is near completion of a comprehensive audit of the newly implemented data management solution. This audit will ensure the data that was migrated from the previous database is consistent and accurate. Once completed, the new system will track and automatically generate customer notification for assembly testing, which is currently a labor-intensive, manual process.



Fleet and Facilities

The team has been busy clearing snow from parking areas across many facilities. The primary focus has been maintaining accessibility at key locations, including the Vail Administration building, Avon Wastewater Treatment Facility, and multiple water production facility sites in East Vail.

CAPITAL IMPROVEMENT PROGRAM (CIP)

Jeff Schneider

WATER PROJECTS

Arrowhead Transmission Main

Mark Mantua

General Project Scope: This project includes replacement of approximately 2,200 linear feet of 16-inch diameter water main from the base of Arrowhead Mountain to Arrowhead Tank 1. The existing pipe is badly corroded. The project also includes installation of a new valve control vault that will help optimize tank filling and balance tank levels in the low-pressure zone.

Project Update: Bids were received on Feb. 2. The bids, post bid submittals, and qualifications are currently under review. The team expects to issue a Notice of Award by Feb. 19.

WASTEWATER PROJECTS

Dowd Junction Collection System Improvements

Jenna Beairsto

General Project Scope: The project consists of four major infrastructure improvements: 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 new infrastructure will be sized to accommodate future growth in the service area, most notably the Minturn area.

Project Update: Start up activities at the new lift station are ongoing. Exterior lights were installed, and the emergency power generator load testing was completed on Jan. 18. Start-up and load testing of the bridge crane was completed on Jan. 26. Pump and grinder testing and training is ongoing. Control system testing is underway. Specialized training sessions for the Field Operations staff are planned over the next several weeks. Wastewater flow is scheduled to be directed to the new lift station the first week of March and a 7-day functional test will be initiated.

Load testing and start-up of the bridge crane

Load testing the new natural gas generator

Exterior light fixture installation above the wet well

Vail Wastewater Treatment Facility (VWW) Master Plan Improvements Mark Mantua

General Project Scope: A condition assessment of the VWW was conducted as part of the 2017 wastewater masterplan. The assessment identified several critical upgrades that are required to keep the facility in reliable and operable condition. The scope of this project includes installation of a new, larger diesel generator, 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: Punchlist work is underway. A new non-potable water line was installed to allow increased wash water flow at the new bar screen. The front plaza concrete replacement has been completed and the plaza drains will be installed when the weather allows. Installation of new UV equipment has been installed and startup performance testing is underway. The team is resolving software and programming issues before the new UV system is placed into service. The new backup generator is expected to be delivered in May.

Edwards WWTF Nutrient Upgrades Jenna Beairsto and Madeleine Harris

General Project Scope: The Edwards Wastewater Treatment Facility must be upgraded to meet Regulation 85 nutrient limits for final total inorganic nitrogen (TIN) and total phosphorus (TP). Expected improvements include renovation of the preliminary treatment equipment, primary bypass improvements, aeration basin modifications and expansion, blower replacements, chemical feed and storage improvements, return and waste activated sludge (RAS/WAS) pump replacements, centrate storage improvements, and HVAC and electrical upgrades. This project will also resolve existing hydraulic process constraints and address condition assessment needs identified in the Wastewater Master Plan. The project must be completed by the CDPHE compliance deadline of Jan 1, 2029.

Project Update: A design services contract was issued with the selected engineering consultant. The project kickoff meeting and a site walk were held on Jan. 31. The first design workshop meeting is scheduled for Mar. 27. The project team is currently assessing various project-delivery options, including Construction Manager at Risk—a strategy that was successfully utilized during the recent Avon Wastewater Treatment Facility nutrient upgrade capital project.

101 Eagle Road Office Improvements Dan Duerr

General Project Scope: The building recently purchased by the District at 101 Eagle Road requires improvements before staff can relocate from the Traer Creek office. The most time-sensitive construction work includes a roof replacement for one half of the building, a new IT network server room, and interior office layout reconfigurations. Space for a proposed large conference room is being planned, but construction may be deferred to a future budget year. CIP staff will be serving as the project manager and general contractor for this project.

Project Update: A workshop was held with the design consultant on Feb. 9 to discuss office arrangements, finishes, and occupancy needs. A mechanical, electrical, and plumbing (MEP) meeting was held on Feb. 12 to discuss design code requirements for each space. The final design is currently being developed. Small improvement projects, such as painting work and fixture replacements, have been initiated.

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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. and Justin Hildreth, P.E.
DATE:	February 14, 2024
RE:	Engineering & Water Resources Report

Development Report

We wanted to share a few updates to the Boards on several items included in the Development Report.

- Edwards River Park PUD (Edwards) – We have received the cash in lieu of water rights deposit for the Edwards River Park project amounting to $1,295,873 and have issued a Conditional Capacity to Serve Letter for an amended PUD application to Eagle County.
- State Land Board Property (Avon) – A board action request seeking approval of the water rights dedication for this project is included in this month's packet.
- Cairns Townhomes (Edwards) – We have received the cash in lieu of water rights deposit for this project, which is proposing 12 townhomes on a narrow lot along Highway 6 in West Edwards and have issued a Conditional Capacity to Serve Letter for a PUD application to Eagle County.
- Warner Building Redevelopment (Eagle-Vail) – We received payment of the cash in lieu of water rights payment for this project that was originally approved in 2019 by the Board. We have issued an Ability to Serve Letter for the project.
- West End PUD (Edwards) – The West End PUD is proposing 275 apartments on vacant land in Edwards adjacent to the Gashouse restaurant. The Authority accepted a cash in lieu of water rights dedication payment for the previously approved project on this site in 2007 that was sufficient to cover the water rights dedication for the currently proposed project. The new PUD received a recommendation of approval from the Eagle County Planning Commission and will now go before the Board of County Commissioners.

We've included an attachment tracking the Authority's remaining unallocated in-basin storage supplies. The tracking sheet only applies to projects that we learned about after we modeled available water supplies for the 2023 water rights report update. Many of the projects included in the Authority Development Report such as the West End PUD, the Warner Building Redevelopment, the Edwards River Park PUD, and the Margaux PUD were already included in our modeling. We currently project 68.12 acre feet of water remaining from the Eagle County workforce housing water and 73.67 acre feet of unrestricted Eagle Park Reservoir supplies including the option water that was purchased from the District and the lease of Colorado River Water Conservation District supplies.

Bolts Lake Reservoir Update

The consultant team of Shannon & Wilson and LRE Water has submitted draft Preliminary Design documents for our review. Currently, a professional cost estimator is developing the preliminary design estimate of probable cost. We aim to present the estimate of probable cost to the District and Authority Boards at the April 4 meeting.

After careful consideration, we selected Black and Veatch to provide Program Manager services. Negotiations for the contract and pricing for the initial startup tasks are underway. Upon execution of the contract, Black and Veatch will review all existing documents and provide recommendations on obtaining federal, state, and local permits, as well as procurement of a final design team.

On January 15, we submitted the feasibility study required by the United States Bureau of Reclamation (USBR) for applying to the Small Storage Projects grant program. The USBR has provided initial feedback, which we are currently addressing. We anticipate the review process by the USBR will take 6 months, after which we plan to apply for funding in the fall 2024 application cycle.

Attachments:

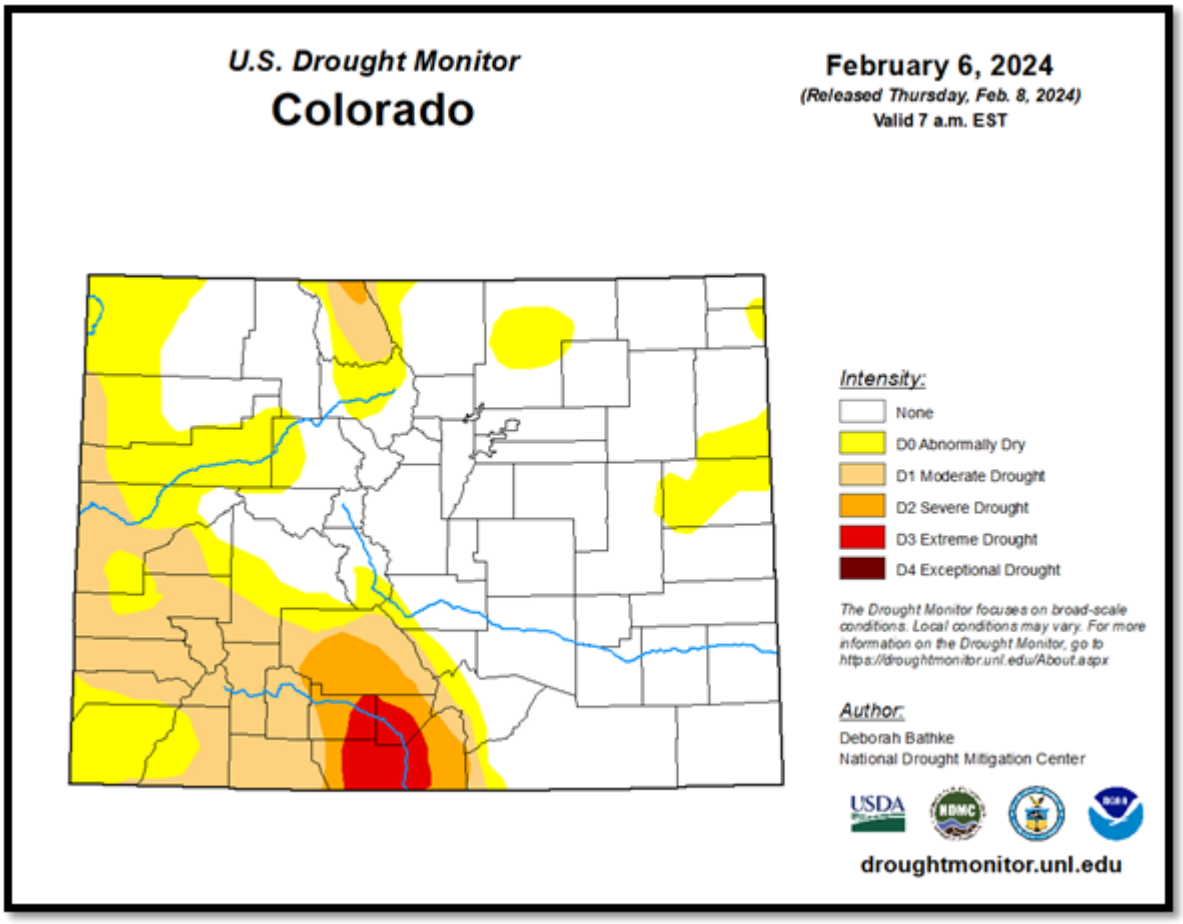
1. Authority Unallocated In-Basin Supply, February 2024
2. ERWSD and UERWA New Development Reports, February 2024

Water Resources Report **Justin Hildreth**

Drought Conditions

On February 6, 2024, the U.S. Drought Monitor classified the eastern portion of Eagle County as not experiencing drought conditions, and classified the western third as abnormally dry, along with the northwest corner of the state. However, the drought intensity for the southwest portion of the state persists as moderate and severe. The eastern portion of the state is generally classified as not in a drought condition.

Figure 1: U.S. Drought Monitor – Colorado. February 6, 2023 (National Drought Mitigation Center)



Temperature and Precipitation Forecasts

Figures 2 and 3 show the current National Weather Service 8-to-14-day temperature and precipitation outlooks. The 2-week outlook for Colorado indicates that the temperatures will be near normal to leaning above normal. The 2-week outlook for Colorado indicates precipitation is leaning above normal. The seasonal 3-month temperature and precipitation outlooks, which are less accurate, indicate equal chances for above or below-normal temperature and precipitation.

Figure 2: 8-14 Day Temperature Outlook – February 11, 2024 (NOAA Climate Prediction Center)

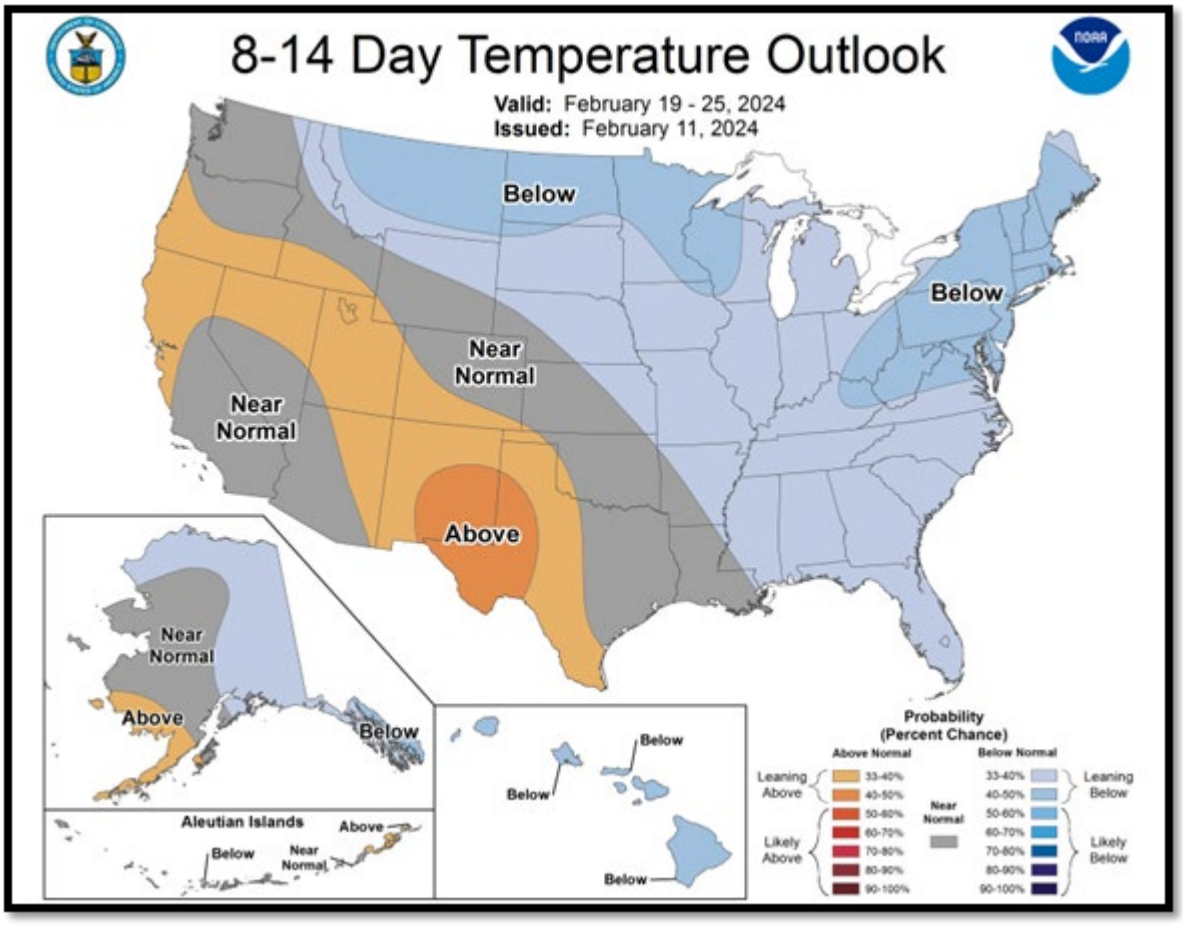
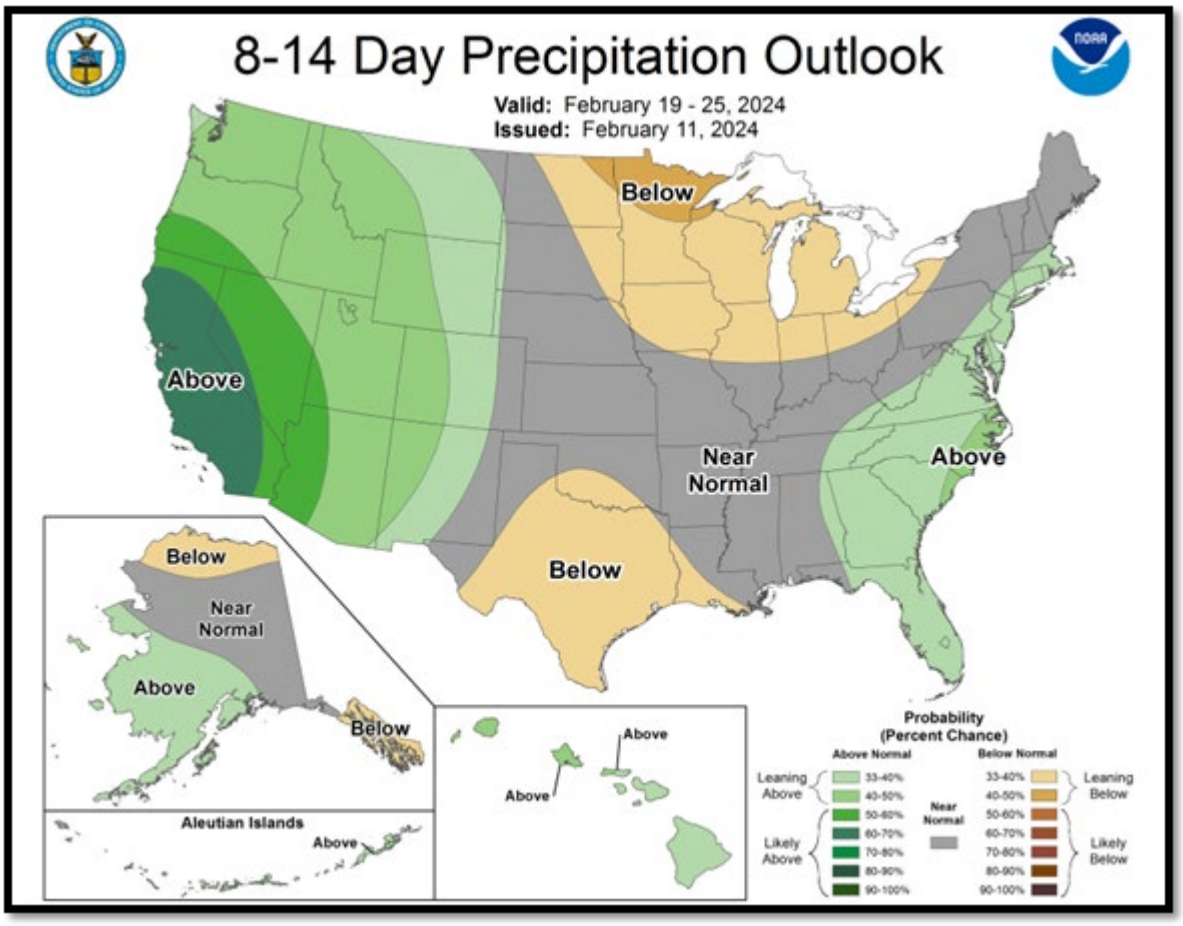


Figure 3: 8-14 Day Precipitation Outlook – February 11, 2024 (NOAA Climate Prediction Center)



Precipitation Conditions

Figures 4 and 5 represent the snow water equivalent (SWE) at Vail Mountain and Fremont Pass SNOTEL sites. As of February 12, 2024, Vail Mountain has 13.8” of SWE, 124% of the median. Fremont Pass has 9.2” of SWE, 85% of the median.

Figure 4: Accumulated Precipitation at Vail Mountain SNOTEL station, February 12, 2024 (USDA)

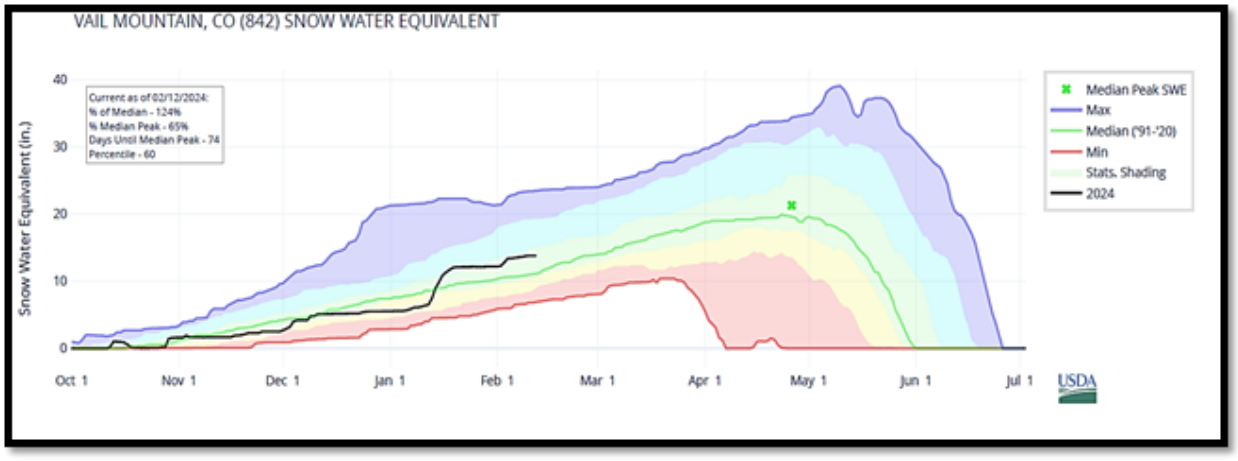
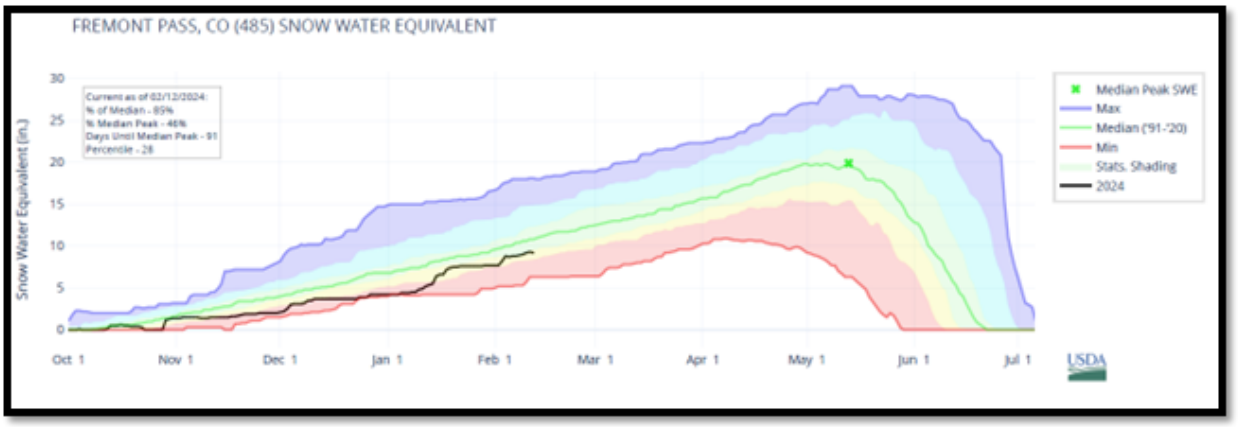


Figure 5: Accumulated Precipitation at Fremont Pass SNOTEL station, February 12, 2024 (USDA)



Reservoir Volumes

Table 1 summarizes the reservoir storage accounts and demonstrates that the reservoir storage accounts are nearly full. We are currently releasing from Black Lakes on Vail Pass to enhance flows on Gore Creek. Eagle Park Reservoir is not currently releasing as the Shoshone Power Plant is expected to remain offline until the summer.

Table 1: District and Authority storage accounts for February 1, 2024 (Helton and Williamsen).

February 1, 2024 Volumes in Storage (acre-feet) and Percentages of Full:

Reservoir	ERWSD		UERWA		Total	
Green Mountain	915.16	98%	475	87%	1390.16	94%
Black Lakes	231.7	55%	231.7	77%	231.7	55%
Eagle Park	405.54	99%	672.28	95%	1077.82	97%
Homestake Res	250	100%	256.50	100%	506.50	100%
Wolford Mtn	500	100%	699.77	98%	1199.77	99%

*Homestake Year is currently set as July 1 to June 30.

Authority Unallocated In-Basin Storage Supply

Updated: 02/06/2024 by JEC

	In-basin Reservoir Storage, acft Affordable Housing Reserve[2]	**In-basin Reservoir Storage, acft** Unrestricted[3]
Available Unallocated In-Basin Storage[1]	**87.40**	**75.00**
Dedication Requirements for New Projects		
State Land Board (Avon)	16.00	--
Eagle-Vail Presbyterian Chuch Employee Housing (Eagle County)	--	0.17
Eagle County Freedom Park Project (Berry Creek)	3.28	
Cairns Townhomes (Edwards)	--	1.16
Total Pending Dedications	**19.28**	**1.33**
Remaining Unallocated In-Basin Storage	**68.12**	**73.67**

Notes:

1) Available Unallocated In-Basin Storage based on modeling for February 2023 Water Rights Report using Buildout Demands with Conservation and 95th Percentile Dry Year Hydrology under Median Climate Change Scenario. Pending developments that were included in the buildout demands include the West End PUD, the Edwards River Park PUD, the Margaux PUD, and the Warner Building Redevelopment.

2) Affordable Housing Reserve In-basin Reservoir Storage is Eagle Park water transferred to UERWA by Eagle County for water rights dedication requirements of housing projects subject to the terms of the Eagle Park Reservoir Stock Agreement between the Authority and Eagle County. Projects utilizing this water are subject to approval by the Authority and Eagle County.

3) Unrestricted In-basin Reservoir Storage includes 25 acft option purchased from ERWSD and 50 acft lease from the Colorado River Water Conservation District.

4) Water dedication requirements and sources are based on best available information and are subject to change.

EAGLE RIVER WATER & SANITATION DISTRICT

ERWSD New Development Report, February 2024

Project Location	Type of Use	SFEs Proposed	Additional Water Rights Required	Application Initiation Date	Development Approval Process Step:	Construction Approval Process Step:
Timber Ridge II Redevelopment	Residential	294 (195.4 net increase)	2.2	July 25, 2023	2. Water Analysis	1. Plan Review
Maloit Park ECO School District Housing Minturn	Residential	138		July 21, 2023	N/A	1. Plan Review
Midtown Village PUD Minturn	Mixed	42 + Com		October 13, 2022	N/A	1. Plan Review
North Minturn PUD Minturn	Residential	36		October 10, 2022	N/A	2. Plan Approval
Middle Creek Lot 4,5 Vail	Mixed	64	0.72	June 28, 2022	0. Conceptual	0. Conceptual
Wolcott PUD Wolcott	Mixed	360 + Com		May 11, 2022	0. Conceptual	0. Conceptual
Belden Place (1200 Block Main St) Minturn	Residential	41		December 23, 2020	N/A	2. Plan Approval
Highline (Double Tree Expansion) Vail	Residential	43.65	0.79	July 11, 2019	5. Ability to Serve Letter	2. Plan Approval
500 E Lionshead Circle - Legacy Vail	Residential	20	0.29	August 29, 2018	4. Water Rights Allocation & Service Agreement	3. Under Construction
Alura (Miradoro) Vail	Residential	10	0.405	May 29, 2018	4. Water Rights Allocation & Service Agreement	3. Under Construction
534 E Lionshead Circle - Elevation Vail	Residential	12	0.31	May 14, 2018	1. Connection Application	0. Conceptual
Booth Heights East Vail	Residential	TBD	TBD	August 23, 2017	1. Connection Application	0. Conceptual
Projects Completing Warranty Period						
VVMC Phase II-East Wing, Vail Marriot Residence Inn, Residences at Main Vail						
Development Approval Process Steps:	1. Connection Application		2. Water Demand Worksheet Analysis	3. Conditional Capacity to Serve Letter	4. Water Rights Allocation & Service Agreement	5. Ability to Serve Letter
Construction Approval Process Steps:	0. Conceptual		1. Plan Review	2. Plan Approval	3. Under Construction	4. Construction Acceptance

UPPER EAGLE REGIONAL WATER AUTHORITY

UERWA New Development Report, February 2024

Project Location	Type of Use	Water Source	SFEs Proposed	Augmentation Requirement (acre-feet)	Application Initiation Date	Development Approval Process Step:	Construction Approval Process Step:
State Land Board Parcels Avon	Mixed	Unallocated	700 Units + 60,000 SF Com	16	August 7, 2023	2. Water Analysis	0. Conceptual
Eagle River Presbyterian Church Housing Unincorporated ECO	Residential	Unallocated	2	0.17	June 20, 2023	3. Cond. Capacity Expires October 24, 2024	1. Plan Review
Cairn's Townhomes Edwards	Residential	Unallocated	12	1.27	June 7, 2023	3. Cond. Capacity Expires January 29, 2025	0.Conceptual
Eagle County - Freedom Park Project Edwards	Mixed	Unallocated	20 + Com	3.28	May 22, 2023	3. Cond. Capacity Expires January 12, 2025	1. Plan Review
Margaux PUD Edwards	Residential	Unallocated	32	3.56	October 11, 2021	3. Cond. Capacity Expires October 9, 2024	0. Conceptual
Edwards River Park PUD Edwards	Mixed	Unallocated	440 + Com	60.85	December 2, 2016	3. Cond. Capacity Expires February 2025	0. Conceptual
Projects not requiring or that have completed Water Rights Dedication							
Gracious Savior Lutheran Church and Eagle County School District Housing Project	Residential	Edwards Metro District Allocated Water Rights	6		November 22, 2023	5. Ability to Serve Letter	N/A
Vail Valley Foundation Childcare Center Traer Creek	Mixed	Traer Creek Water Service Agreement	TBD		October 13, 2023	1. Connection Application	0. Conceptual
Slopeside Housing Avon	Residential	Avon SFE Guarantee	TBD		October 5, 2023	1. Connection Application	0. Conceptual
140 W BC BVLD Hotel Avon	Residential	Avon SFE Guarantee	79		May 16, 2023	N/A	1. Plan Review
Tract Y- Metcalf Road Avon	Residential	Avon SFE Guarantee	53		February 16, 2023	5. Ability to Serve Letter	3. Under Construction
Avon Dual Brand Hotel Traer Creek - Tract J	Commercial	Traer Creek Water Service Agreement	85.05		February 4, 2022	5. Ability to Serve Letter	3. Under Construction
ECO School District Housing Berry Creek	Residential	Berry Creek Allocated Water Rights	37		August 12, 2021	5. Ability to Serve Letter	4. Construction Acceptance
McGrady Acres Avon	Residential	Avon SFE Guarantee	24		August 5, 2021	5. Ability to Serve Letter	3. Under Construction
Riverfront Lot 1 Avon	Residential	Avon SFE Guarantee	53		December 22, 2020	N/A	3. Under Construction
Maverik Gas Station Traer Creek	Commercial	Traer Creek Water Service Agreement	2.6		November 11, 2020	5. Ability to Serve Letter	4. Construction Acceptance
NorthStar PUD Amendment Edwards	Commercial	Unallocated	TBD	3.7	November 3, 2020	5. Ability to Serve Letter	4. Construction Acceptance
Warner Building 2 Conversion Eagle-Vail	Residential	Unallocated	13.6	0.07	March 16, 2018	5. Ability to Serve Letter	N/A
West End PUD Amendment Edwards	Residential	Unallocated	275	34.25	February 27, 2019	3. Cond. Capacity Reissued Nov. 15, 2023	1. Plan Review
Fox Hollow Amended PUD Edwards	Mixed	Unallocated	108	14	February 28, 2017	5. Ability to Serve Letter	3. Under Construction
Projects Completing Construction Warranty Period							
CMC Student Housing , Frontgate, Piedmont Apartments							

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

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: February 22, 2024

RE: Communications and Public Affairs Report

2024 Colorado Legislative Session
Senate Bill 24-005, Prohibit Landscaping Practices for Water Conservation, passed out of the Senate and is scheduled to be heard by the House Agriculture, Water & Natural Resources committee on Feb. 26. Both boards support this bill. See related Aspen Journalism story mentioned below.

We are monitoring water/wastewater and special district-related bills, as well as housing bills that may impact water and sanitation services. Senate Bill 24-081, Perfluoroalkyl & Polyfluoroalkyl Chemicals, is scheduled to be heard by the Senate Business, Labor, & Technology committee on Feb. 27.

Shoshone Water Right Preservation Campaign
The Colorado Water Conservation Board voted at their Jan. 29 meeting to recommend $20 million in funding towards the Shoshone acquisition as part of the legislature's annual Water Projects Bill. This adds to the Colorado River District's $20 million commitment. The coalition is also looking to secure $10 million from Western Slope partners and will pursue federal funding of nearly $50 million. We are participating in the awareness campaign to help keep the topic in the public's awareness. We worked with the town of Vail to host the Colorado River District for a Feb. 7 "Lunch with the Locals" talk, which generated two Vail Daily stories (see attached).

Attachments (or hyperlinks):
1. Feb. 13, Colorado Sun: *Dozens of Colorado farmers, ranchers and one city cut Colorado River water use in exchange for $8.7M*
2. Feb. 9, KUNC: *In $100 million Colorado River deal, water and power collide*
3. Feb. 8, Vail Daily: How the Shoshone water rights acquisition helps Eagle County
4. Feb. 7, Vail Daily: Find out more about the Shoshone water rights agreement in Vail on Wednesday
5. Feb. 6, Aspen Journalism: *Colorado Springs agrees to give up water rights for Summit County reservoirs*
6. Jan. 31, Aspen Journalism: Bill limiting nonfunctional turf planting clears Colorado Senate

VailDaily

How the Shoshone water rights acquisition helps Eagle County

While upstream of the Shoshone Power Plant, Eagle County water users reap several benefits from the $98.5 million purchase

News FOLLOW NEWS | Feb 8, 2024

Zoe Goldstein FOLLOW
zgoldstein@vaildaily.com

The Shoshone Power Plant, near Glenwood Springs, generates electricity through non-consumptive use of the Colorado River. On Dec. 19, the Colorado River Water Conservation District and Xcel Energy, the company that owns the power plant, signed a purchase and sale agreement to pass the Shoshone water rights to the river district for $98.5 million, to protect the river's flows in perpetuity.
Hugh Carey/The Colorado Sun

Looking at a map of Western Slope river flows, it quickly becomes apparent that Eagle County is upstream of the Shoshone Power Plant. On Dec. 19, the Colorado River Water Conservation District signed a $98.5 purchase and sale agreement with Public Service Company of Colorado, a subsidiary of Xcel energy, to buy the rights to access the water that flows through the Shoshone dam.

What does this deal mean for Eagle County? The town of Vail hosted a Lunch with the Locals on Wednesday, Feb. 7, to discuss just that.

History of the deal

The deal has been 20 years in the making and has the support of 20 water-focused organizations on the Western Slope, including the Eagle River Water & Sanitation District and the Upper Eagle Regional Water Authority.

The Shoshone water rights agreement allows for an allotted amount of water flowing through the Shoshone Power Plant near Glenwood Springs "to be protected in perpetuity, and to keep that water in the river regardless, hopefully, of whether power production continues, and regardless of the impacts of climate change, and regardless of the growing need for water in other communities, including the Front Range" said Lindsay DeFrates, deputy director of public relations for the Colorado River Water Conservation District.

The Shoshone water rights are the largest and most senior non-consumptive rights on the Colorado River. Non-consumptive means that the water taken out by the power plant is ultimately returned in full to the river. Most senior means that any water rights upstream of the power plant must first allow the Shoshone call for its allotted amount of water to be filled first before junior users take water from the river.

The two attached Shoshone water rights were established in 1902 and 1929, and enable 1,250 cubic feet per second and 158 cubic feet per second of water to flow through Glenwood Canyon. Together, the Shoshone call amounts to up to 1.02 million acre-feet of water per year, which would more than fill Blue Mesa reservoir, DeFrates explained.

Diane Johnson (left) and Lindsay DeFrates (right) speak about the relevance of the Shoshone water rights acquisition to Eagle County water users during a Vail Lunch with the Locals on Feb. 7.
Zoe Goldstein/Vail Daily

The water flows must be tied to "beneficial use," DeFrates said. "Right now, the beneficial use is hydropower production. This purchase would add another beneficial use, an instream flow beneficial use which would be managed by the state of Colorado, CWCB (Colorado Water Conservation Board), to make sure that even if those turbines stop spinning, the same amount of water is still reaching that point (the power plant)."

The acquisition has benefits for the entire state. The endangered fish conservation program in the 15-mile reach (a 15-mile stretch of the Colorado River in Mesa County), the agriculture industry, water quality providers, and the recreation industry all benefit from consistent flows in the Colorado River.

Why now?

This deal comes out of the river district's fourth ask of Xcel to sell the rights. Though it is unclear why Xcel chose to sell now, climate change impacts including mudslides, wildfires, and reduced water flows may have factored into the decision, DeFrates said.

For the river district, there are "historic" amounts of funding available, at the local, state, and federal levels, DeFrates said. Already, funds are prepared for about half of the $98.5 million purchase price, coming from the river district, the 20 supporting entities, and the state of Colorado.

The purchase, too, becomes increasingly important as "worrying" trends of climate change continue, DeFrates said. Trends show decreasing streamflow and increasing annual average temperature tied to hotter summers, which reduce snowpack, causing streamflows to drop and temperatures to increase sooner in the year.

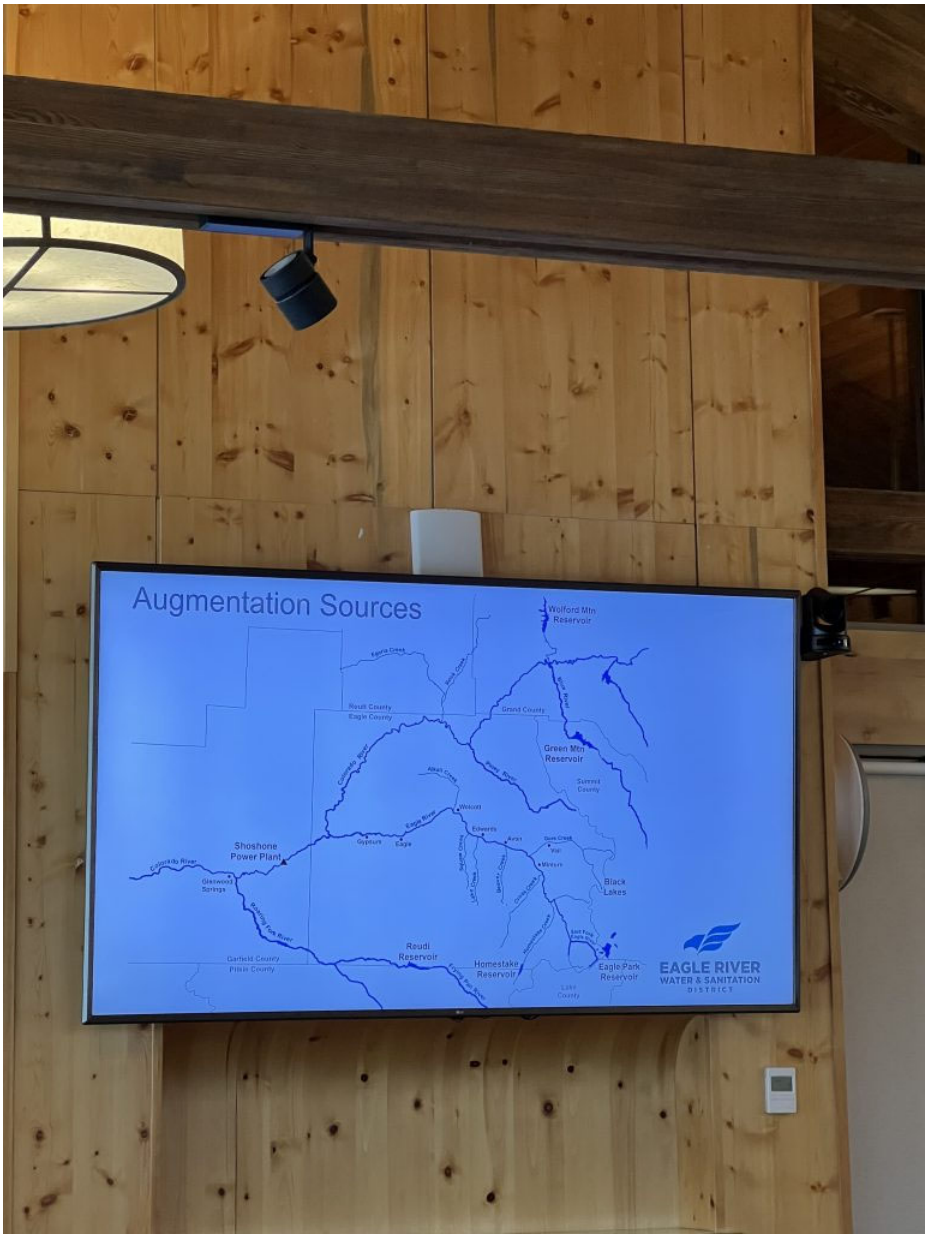
"We're wondering, if that trend continues, and all of our communities are trying to support their water portfolios, including those on the Front Range, when does that straw start pulling more out of the headwaters here in the Colorado River?" DeFrates said.

Accounting for contingencies built into the purchase and sale agreement, including finding full funding, and going to water court to legally acquire the new rights, the river district is aiming for a closing date on the purchase in 2027.

Where does Eagle County fit in?

"Every time we talk about this one point on the river, it's funny to think about its impacts going upstream and downstream and sideways onto dry land," DeFrates said.

To understand how Eagle County fits into the equation, it helps to take a look at the whole picture of water on the Western Slope.



A broad look at Western Slope water sources reveals that although Eagle County is upstream of the Shoshone Power Plant, water users benefit from the Shoshone call because it encourages water to be diverted West, allowing for more water to flow through Eagle County.
Zoe Goldstein/Vail Daily

The Shoshone water call, Johnson said, “is what keeps water flowing down the Eagle River.”

The main water reserves for the Eagle River Water & Sanitation District are the Black Lakes above Vail Pass and the Eagle River Reservoir above Camp Hale, explained Diane Johnson, who is the communications and public affairs manager for the water district.

That water can be released by the water district to water users in Eagle County to allow for showering, washing dishes, watering lawns, and more. However, Johnson said, the reserves in Eagle County “are not very big. We do not have a huge bucket.”

This is where the Shoshone water call comes in.

The Eagle County water folks can ask for water from the Green Mountain Reservoir, located at the northern edge of Summit County, which travels down through Eagle County and eventually reaches the Shoshone Power Plant. If the Shoshone call went away, Front Range diversions could take water from Western Slope sources, such as the Green Mountain Reservoir.

“That’s hugely important for how we meet all of your demand, and so for us to be able to know that Shoshone Power Plant, that that water right will continue to flow, it makes it more secure for you because we don’t have to use our water (from local reservoirs),” Johnson said.

VailDaily

Find out more about the Shoshone water rights agreement in Vail on Wednesday

The $98.5 million deal between Colorado River Water Conservation District and Xcel Energy will preserve upper Colorado River's flows in perpetuity

News FOLLOW NEWS | Feb 7, 2024

Zoe Goldstein FOLLOW
zgoldstein@vaildaily.com

The Shoshone Power Plant, near Glenwood Springs, generates electricity through non-consumptive use of the Colorado River. The Colorado River Water Conservation District and Xcel Energy, the company that owns the power plant, came to an agreement on Dec. 19 to sell the Shoshone water rights to the river district for $98.5 million, to protect the river's flows in perpetuity.
Hugh Carey/The Colorado Sun

Vail's Lunch with the Locals series on Wednesday features Lindsay DeFrates, deputy director of public relations for the Colorado River Water Conservation District, and a representative of the Shoshone Water Right Preservation Coalition. DeFrates and representatives from the Eagle River Water & Sanitation District will present on the Shoshone water rights deal and its impacts on Eagle County, and take questions from attendees.

On Dec. 19, the Colorado River Water Conservation District signed a purchase and sale agreement with Xcel Energy to acquire the water rights to the Shoshone Power Plant. Xcel Energy currently holds the water rights to use for hydroelectric power production at the facility.

What does the deal entail?

The Shoshone water rights deal will "protect the flows of the upper Colorado River in perpetuity," DeFrates said, meaning that as already evident impacts of climate change escalate, the way the river flows should not change.

"We have seen flows diminish significantly due to the impacts of climate change over the last few decades, and we're recognizing that science is telling us that those changes are going to continue, and perhaps even be exacerbated, and so there's going to be less water available, potentially, as stream flows drop," DeFrates said. "This deal secures that amount of water in the river going forward, not just 20, 50, or 100 years, but onward, as long as our water rights structure and government is maintained."

The purchase of the water rights ensures the water that flows through the upper Colorado River and the Eagle River is not impacted by intermittencies in the functioning of the hydroelectric plant.

"We want to make sure that water stays in the river in perpetuity, so we're protecting the flows of the upper Colorado and the Eagle River by ensuring that if power production were to cease at this plant, the water could still come down as an in-stream flow right, which would be a partnership between our organization and the state of Colorado, the Colorado Water Conservation Board," DeFrates

said.

Purchasing the water rights was essential "to make sure that we continue the flow regime that we're familiar with out here — water reaching Glenwood Canyon, flowing through it," DeFrates said.

For as long as Xcel Energy wants to continue operations at the hydroelectric plant, the river district will lease the water rights back to the company at no cost. If operations at the plant pause or cease, the water will continue to flow as usual, and will still arrive in Glenwood Canyon as if the power plant was running.

'Oldest and largest non-consumptive water rights'

The Shoshone water rights "are the oldest and largest non-consumptive water rights on the mainstem of the Colorado River," DeFrates said.

The Shoshone water rights were established in 1902, predating the Colorado River Compact, and are among the oldest rights on the entire mainstem, as well as the oldest non-consumptive rights. The Shoshone water rights require that 1,250 cubic feet per second of water reach the calling point at the Shoshone Dam near Dotsero before junior water users upstream can take water from the river.

The non-consumptive nature of the Shoshone water rights means that all water taken out to fuel the hydroelectric plant will ultimately be returned to the river — there is no loss in the process.

"Water is drawn out of the Colorado River, it is pushed through pipes for about two-and-a-half miles, and then sent down through into the turbines to spin and to make clean energy for about 15,000 customers for Xcel, and then (it is) sent right back into the river," DeFrates said.

"So many of the water rights that we're familiar with — municipal, and agricultural — they all have a consumptive nature. It's being used, it doesn't come back in the same amount that it was taken, but these are non-consumptive. By purchasing these rights and attaching the in-stream flow to it, we are making sure that water continues on downstream," DeFrates said.

All types of users will benefit from the deal, which will preserve the Colorado River's flows for recreational — such as these boaters who travel down Glenwood Canyon as a New Year's Day tradition — agricultural, environmental, and municipal users.
John LaConte/Vail Daily archive

The timeline of acquiring the Shoshone water rights has been lengthy. “(The river district) and about 19 other entities have been working at this for about 20 years. The Colorado River Cooperative Agreement was the first step in that process, but Shoshone permanency has been a goal of our predecessors for a long time here at the river district,” DeFrates said.

After approaching Xcel Energy four times to see if the company was willing to sell the Shoshone water rights, the company acceded. “Between funding availability and the challenge of running an operation in the Glenwood Canyon with wildfires and mudslides, Xcel is a willing partner in this process, now, especially realizing how positively impactful it will be to West Slope communities,” DeFrates said.

Beneficiaries of the deal

Several types of water users will benefit from the water rights deal, including agricultural, recreation, environmental, and municipal communities.

The environmental benefits of preserving Colorado River flows include protecting four species of endangered fish that live in the 15-mile reach in Mesa County.

Several towns draw water directly from the Colorado River, including the towns of Silt and Rifle. “If those flows drop, you see a concentration of contaminants and sediment that makes water treatment much more expensive,” DeFrates said.

Funding sources

The purchase price on the deal totals $98.5 million. $20 million of the funding will come from the river district over the course of three years, through its community funding partnership grant. Another $20 million will come from the state, in a grant approved last week by the Colorado Water Conservation Board, that will go through the water projects bill in this session of the state legislature.

Another approximately $10 million in funding will come from the 19 other entities that partnered with the river district to support Shoshone permanency, all of which will contribute some amount.

The other half of the funding has yet to be sourced, but the river district is hard at work securing it. This summer, the river district is “hoping to bring a competitive application for funding from the Inflation Reduction Act drought mitigation funding that’s available,” DeFrates said.

More information about the Shoshone water rights acquisition, and the opportunity to ask questions, will be available at Vail’s lunch with the locals on Wednesday, Feb. 7, at noon in the Grand View room in the Lionshead parking structure. More information about the The Shoshone Water Right Preservation Coalition, the campaign of the 20 entities that support Shoshone permanency, can be found at KeepShoshoneFlowing.org.

Aspen Journalism
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WATER

Colorado Springs agrees to give up water rights for Summit County reservoirs

In exchange, the utility will be allowed to expand Montgomery Reservoir without Western Slope opposition

by **Heather Sackett**
February 6, 2024

Montgomery Reservoir, a source of water for Colorado Springs Utilities, can hold about 5,700 acre-feet of water. As the result of an agreement with West Slope opposers, Colorado Springs will be allowed to enlarge the reservoir to hold an additional 8,100 acre-feet without West Slope opposition.

CREDIT: COLORADO SPRINGS UTILITIES

Colorado Springs has agreed to give up water rights tied to reservoirs in the Blue River basin in exchange for the ability to expand Montgomery Reservoir on the east side of the Continental Divide without opposition from Western Slope entities.

Colorado Springs Utilities had been fighting in water court since 2015 to hang on to conditional water rights originally decreed in 1952 and tied to three proposed reservoirs: Lower Blue Reservoir, on Monte Cristo Creek; Spruce Lake Reservoir, on Spruce Creek; and Mayflower Reservoir, which would also have been built on Spruce Creek. Lower Blue Reservoir was decreed for a 50-foot-tall dam and 1,006 acre-feet of water; Spruce Lake Reservoir was decreed for an 80- to 90-foot-tall dam and 1,542 acre-feet; and Mayflower Reservoir, was decreed for a 75- to 85-foot-tall dam and 618 acre-feet.

After negotiations with eight opposers, including the Colorado River Water Conservation District, Summit County and the town of Breckenridge, the parties are set to approve an agreement that would cancel the conditional water rights for Spruce Lake and Mayflower reservoirs. A third potential reservoir, Lower Blue, would keep its 70-year-old rights, but Colorado Springs would transfer the majority of the water stored to Breckenridge and Summit County, and would share the costs of building that reservoir, which would be owned and operated by Breckenridge and Summit County.

In exchange, the Western Slope parties will not oppose Colorado Springs' plan to enlarge Montgomery Reservoir to hold an additional 8,100 acre-feet of water for a total capacity of about 13,800 acre-feet. That project is expected to enter the permitting phase in 2025. After the permitting and construction of the Montgomery Reservoir expansion, the conditional water rights for Spruce Lake and Mayflower reservoirs would be officially abandoned and the water rights for Lower Blue Reservoir transferred to Summit County and Breckenridge.

"These conditional rights we're relinquishing in the agreement are for future reservoirs that would be difficult to permit and build for us," Jennifer Jordan, senior public affairs specialist at Colorado Springs Utilities (CSU), said in an interview with Aspen Journalism. "And we can gain in average years that same yield and perhaps a little bit more by getting the Montgomery Dam enlargement completed."

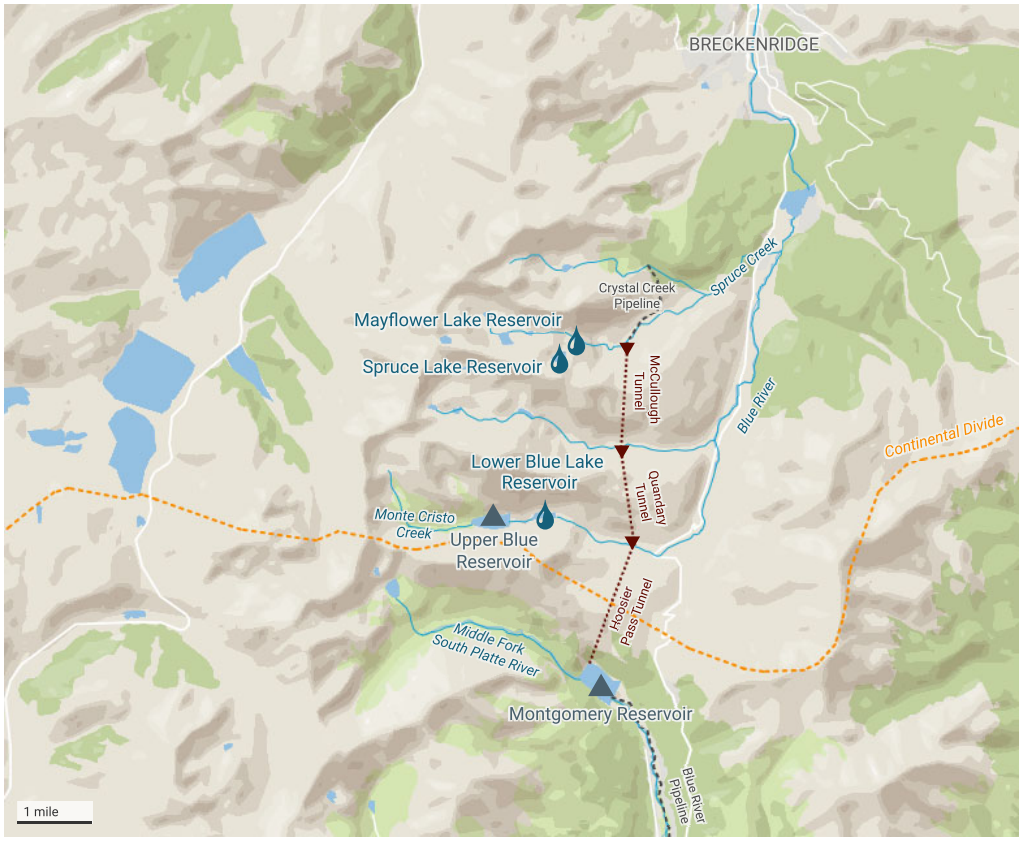
A 2015 evaluation of the conditional water rights and proposed reservoirs by Wilson Water Group found several potential environmental and permitting stumbling blocks, including the presence of endangered species and challenging high-Alpine road construction.

CSU also agreed to a volumetric limit of the amount it will be allowed to take through the Hoosier Tunnel after the Montgomery Reservoir expansion: 13,000 acre-feet per year over a 15-year rolling average. CSU currently takes about 8,500 acre-feet per year through the tunnel.

Montgomery Reservoir is part of CSU's Continental Hoosier System, which takes water from the headwaters of the Blue River between Breckenridge and Alma to Colorado Springs via the Hoosier Tunnel, Montgomery Reservoir and Blue River Pipeline. It is the city's oldest transmountain diversion project.

Each year, transmountain diversions take about 500,000 acre-feet from the Colorado River basin to the Front Range. Colorado Springs is a large water user that draws from this vast network of tunnels and conveyance systems that move water from the mountainous headwaters on the west side of the Continental Divide to the east side, where the state's biggest cities are located. Colorado Springs' largest source of Western Slope water is its Twin Lakes system, which draws from the headwaters of the Roaring Fork River above Aspen.

Proposed reservoirs on the Blue River



Map: Laurine Lassalle - Aspen Journalism • Source: Colorado Springs Utilities • Created with Datawrapper

CSU to support Shoshone

The Glenwood Springs-based River District was created in 1937 to combat these types of diversions and keep water on the Western Slope. It was one of the entities that opposed CSU's conditional water rights in its nearly nine-year water court battle, which kicked off when the water provider filed a diligence application. That is the process in which a conditional water-right holder must demonstrate to the water court that it can and will eventually develop the water right, and that in the previous six years, it has done its diligence in seeing a project through.

On Jan. 16, the River District board approved the settlement agreement, which includes a commitment from Colorado Springs that the utility will support the River District's efforts at securing the Shoshone water right.

The River District is working to purchase water rights from Xcel Energy associated with the Shoshone hydropower plant in Glenwood Canyon. The water rights date to 1902 and are nonconsumptive, meaning the water would stay in the river and flow downstream to the benefit of the environment, endangered fish and other water users on the Western Slope. The Colorado Water Conservation Board approved $20 million toward the $98.5 million purchase last week.

"The settlement provides additional local water supplies to the Blue River Valley and a commitment of support from Colorado Springs Utilities for the Shoshone Water Right Preservation effort, which provides substantial benefits to the health of the entire Colorado River, including important water security, economic and environmental benefits to the West Slope," River District General Manager Andy Mueller said in a prepared statement. "In addition, the West Slope will benefit from clearly specified limits on the total amount of water Colorado Springs can divert through its Continental-Hoosier transmountain diversion tunnel."

The agreement was also good news for Breckenridge, which will split the 600 acre-feet of water from Colorado Springs in a future Lower Blue Reservoir equally with Summit County. The reservoir was originally decreed for 1,006 acre-feet, but the agreement now limits the reservoir capacity to 600 acre-feet. Colorado Springs will retain the remaining amount, about 400 acre-feet, which can be stored in Montgomery Reservoir.

Breckenridge Mayor Pro Tem Kelly Owens said Breckenridge will be able to use the stored water in late summer, when flows in the Blue River are at their lowest.

"The way we see it is that we've now protected those waters, the snowmelt, and keeping it in the Blue River basin," Owens said.

According to the agreement, Colorado Springs would pay 50% of the construction costs of a future Lower Blue Reservoir, and Breckenridge and Summit County would each pay 25%.

Colorado Springs City Council is expected to approve the agreement at its Feb. 13 meeting.

*This story ran in the Feb. 5 edition of the **Summit Daily**.*

Return to agenda

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MEMORANDUM

TO: Eagle River Water & Sanitation District Board of Directors
Upper Eagle Regional Water Authority Board of Directors

FROM: Kristin Moseley

SUBJECT: Bolts Ditch Act, H. R. 4297 – United States House Subcommittee on Federal Lands of the Committee on Natural Resources and Legislation Next Steps

DATE: February 14, 2024

As you know, Siri was invited to testify in support of the Bolts Ditch Act, H.R. 4297, before the United States House Subcommittee on Federal Lands of the Committee on Natural Resources on January 31, 2024. Siri's testimony was very well received by the Subcommittee. On February 6, 2024, the Natural Resources Committee considered mark-ups of the Bolts Ditch Act and approved it without revision by Order of Unanimous Consent. The next step in the legislative process is for the bill to be scheduled for a hearing before the House as a whole for consideration, debate and potential amendments. Once it passes the House as a stand-alone bill, it would then be referred to the Senate for a similar legislative procedure (see the attached legislative flow chart).

The District and Authority also have an identical stand-alone Bolts Ditch Act bill pending before the United States Senate in S. 2156. As we have previously discussed, we do not anticipate that the House or the Senate bills will move through the entire legislative process as stand-alone bills given current congressional dynamics. Rather, once the bills have passed Committees in both chambers, we anticipate that one of the bills will be added to an omnibus bill, similar to the way Minturn's previous bill was added to the John D. Dingell, Jr. Conservation, Management, and Recreation Act in 2019.

While we were in Washington, D.C. for the hearing, Siri, Michelle Metteer, our federal legislative lobbyist, Tom Glass, and I met with Senator Bennett's and Senator Hickenlooper's senior legislative staff to discuss scheduling a Senate Committee hearing. We are continuing in that lobbying effort and hoping to have a Senate Committee hearing this spring.

Attached are copies of the formal invitation that Siri received to provide testimony by the House Natural Resources Committee and her written testimony. Also attached are letters of support from the Town of Minturn, the Colorado River District and the Town of Avon. The Town of Vail passed the attached Resolution in support of the Bolts Ditch Act on February

6th, and the Towns of Minturn and Avon have Resolutions on their Town Council meeting agendas for consideration in coming weeks. Finally, attached is a copy of the Vail Daily article entitled "*ERWSD General Manager Testifies Before Congressional Committee re: Bolts Ditch*".

I

118TH CONGRESS
1ST SESSION

H. R. 4297

To amend the John D. Dingell, Jr. Conservation, Management, and Recreation Act to allow for additional entities to be eligible to complete the maintenance work on Bolts Ditch and the Bolts Ditch Headgate within the Holy Cross Wilderness, Colorado.

IN THE HOUSE OF REPRESENTATIVES

JUNE 22, 2023

Mr. NEGUSE (for himself and Mr. LAMBORN) introduced the following bill; which was referred to the Committee on Natural Resources

---

A BILL

To amend the John D. Dingell, Jr. Conservation, Management, and Recreation Act to allow for additional entities to be eligible to complete the maintenance work on Bolts Ditch and the Bolts Ditch Headgate within the Holy Cross Wilderness, Colorado.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Bolts Ditch Act".

SEC. 2. ADDITIONAL ENTITIES ALLOWED TO MAINTAIN BOLTS DITCH AND THE BOLTS DITCH HEADGATE.

Section 1101(a) of the John D. Dingell, Jr. Conservation, Management, and Recreation Act (Public Law 116–9) is amended by inserting before the period at the end the following: ", the Eagle River Water and Sanitation District, a Colorado Special District, or the Upper Eagle Regional Water Authority, an authority organized under the laws of the State of Colorado".

BRUCE WESTERMAN OF ARKANSAS
CHAIRMAN

VIVIAN MOEGLEIN
STAFF DIRECTOR

RAÚL M. GRIJALVA OF ARIZONA
RANKING DEMOCRAT

LORA SNYDER
DEMOCRAT STAFF DIRECTOR

U.S. House of Representatives
Committee on Natural Resources
Washington, DC 20515

January 24, 2024

Ms. Siri Roman, P.E.
General Manager
Eagle River Water & Sanitation District
846 Forest Road
Vail, CO 81657

Dear Ms. Roman:

The Subcommittee on Federal Lands will hold a legislative hearing on Wednesday, January 31, 2024 at 10:00 a.m. in room 1324 Longworth House Office Building on the following bills:

- H.R. 674 (Rep. Newhouse), "*Root and Stem Project Authorization Act of 2023*";
- H.R. 4297 (Rep. Neguse), "*Bolts Ditch Act*";
- H.R. 5443 (Rep. Lee of NV), "*Accelerating Appraisals and Conservation Efforts Act*" or "*AACE Act*";
- H.R. 6994 (Rep. Kim of CA), "*Restoring Our Unopened Trails for Enjoyment and Safety (ROUTES) Act*"; and
- H.R. 7072 (Rep. Tiffany), "*Wabeno Economic Development Act of 2024*".

I cordially invite you to testify on H.R. 4297 at this hearing.

Enclosed with this letter are the parameters regarding written and oral testimony. Should you have any questions or need additional information, please contact Colen Morrow, Clerk, Subcommittee on Federal Lands, at (202) 226-7736.

Sincerely,

Thomas P Tiffany

Tom Tiffany
Subcommittee on Federal Lands
Chairman

Enclosure

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

Written Testimony of Siri Roman, General Manager
Eagle River Water & Sanitation District and Upper Eagle Regional Water Authority
Before the House Subcommittee on Federal Lands of the Committee on Natural Resources
Hearing on H.R. 4297, "Bolts Ditch Act"
January 31, 2024

Chairman Tiffany, Ranking Member Neguse, and Members of the Subcomittee:

My name is Siri Roman, and I am testifying in support of H.R. 4297 in my role as General Manager of the Eagle River Water & Sanitation District and the Upper Eagle Regional Water Authority. The District and Authority are municipal water and wastewater providers that serve more than 50,000 people in the Colorado mountain resort communities of Vail, Beaver Creek, and the surrounding areas. Together, we are the second largest water provider in Western Colorado.

This legislation is needed because a minor mapping error occurred in 1980 when the Holy Cross Wilderness was originally designated. The Bolts Ditch, which was used to fill a water storage reservoir that was originally constructed in the early 1900s, was mistakenly included in the wilderness boundary. While the Bolts Ditch diversion structure is only 450 feet within the Holy Cross boundary, the wilderness designation prevented the continued use, maintenance, and repair of Bolts Ditch and its diversion structure.

In 2019, the Town of Minturn sought a narrow wilderness exemption in order to rehabilitate Bolts Ditch as part of its municipal water system. The John D. Dingell, Jr. Conservation, Management, and Recreation Act directed the Secretary of Agriculture to permit non-motorized access exclusively to the town of Minturn to use, maintain, and repair the Bolts Ditch diversion structure and 450 lineal feet of Bolts Ditch.

The Bolts Ditch Act is a simple amendment to the Dingell Act, explicitly granting the District and Authority the same access as the Town of Minturn.

For the betterment of our watershed and community, the District, Authority, and the Town of Minturn, are working together to rehabilitate the Bolts Lake diversion structure and ditch. The Town of Minturn supports this legislation, and their Town Manager, Michelle Metteer, is joining me at this hearing.

The District and Authority's service area is located in the headwaters of the Colorado River basin in Eagle County. Like many areas of the mountain west, approximately 80% of our region's precipitation falls in the form of snow in our high mountain peaks. The vast majority of the annual water supply reaches our local stream systems within a very short period of time during spring snowmelt. A reservoir to capture the spring runoff is essential to provide water on a year-round basis for our residents and visitors.

In 2021, the District and Authority acquired ownership of Bolts Ditch and the Bolts Lake property to construct a new 1,200 acre foot reservoir at the previous Bolts Lake site. It will be an off-channel reservoir, meaning it will not dam any free-flowing streams.

Bolts Ditch is an essential filling source for the new Bolts Lake Reservoir and will help to provide sufficient municipal water supplies for our region, including the Town of Minturn. Bolts Lake will boost environmental flows during times of low flow and will provide additional recreation opportunities to support Western Colorado's recreation-based economy.

The purpose of this legislation is to grant the District and Authority explicit access to use, maintain, and repair the Bolts Ditch diversion, and it will make the redevelopment of Bolts Lake, and all its benefits, possible.

We would be grateful for your support of this legislation.

Supporting this written testimony are the following materials:

Attachment A: Overview of Bolts Ditch and Bolts Lake Reservoir
Attachment B: Map of Bolts Ditch area, south of Minturn, CO
Attachment C: Photograph of Bolts Ditch intake and diversion structure
Attachment D: Photograph of Bolts Ditch diversion structure

EAGLE RIVER WATER & SANITATION DISTRICT

UPPER EAGLE REGIONAL WATER AUTHORITY

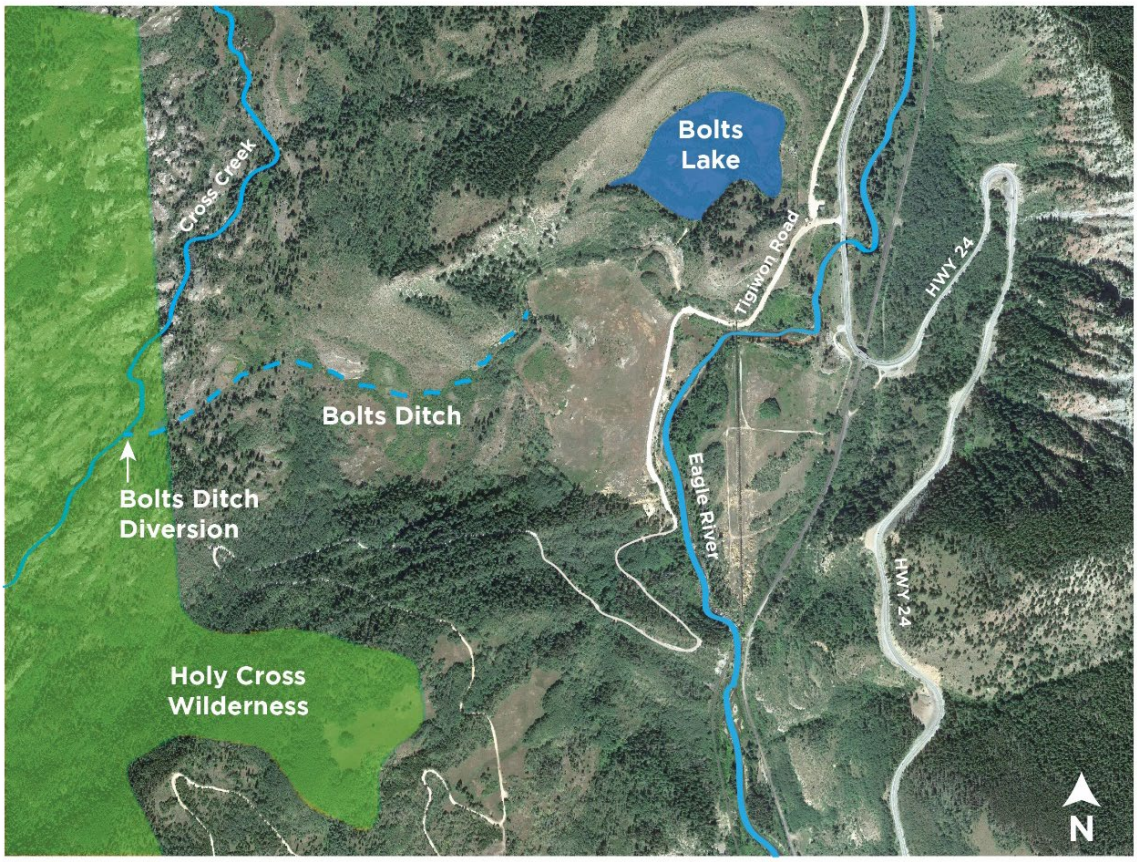
Overview of Bolts Ditch and Bolts Lake Reservoir

Eagle River Water & Sanitation District (ERWSD) and Upper Eagle Regional Water Authority (UERWA) are planning to redevelop Bolts Lake in Minturn with a 1,200 acre-foot reservoir. The reservoir was originally developed as a recreational reservoir by Ben Bolt in 1890, when he diverted water from Cross Creek into a natural basin. The reservoir has been inactive since 1996, when the dam was breached by order of Colorado's State Engineer. ERWSD and UERWA serve 50,000 customers and are collectively the second largest municipal water supplier in Western Colorado. This reservoir will provide necessary additional in-basin storage supplies to service their customers while maintaining healthy river flows. Bolts Ditch is an essential filling source for the new Bolts Lake Reservoir and will help to provide sufficient municipal water supplies for our region, including the town of Minturn.

EAGLE RIVER
WATER & SANITATION
DISTRICT

UPPER EAGLE REGIONAL
WATER AUTHORITY

Attachment B: Map of Bolts Ditch area, south of Minturn, CO



EAGLE RIVER
WATER & SANITATION
DISTRICT

UPPER EAGLE REGIONAL
WATER AUTHORITY

Attachment C: Photograph of Bolts Ditch intake and diversion structure

EAGLE RIVER
WATER & SANITATION
DISTRICT

UPPER EAGLE REGIONAL
WATER AUTHORITY

Attachment D: Photograph of Bolts Ditch diversion structure

Michelle Metteer
301 Boulder St #309 / 302 Pine St
Minturn, CO 81645
970-445-2418
www.minturn.org
manager@minturn.org

January 24, 2024

Congressman Joe Neguse
Washington, D.C. Office
2400 Rayburn HOB
Washington, DC 20515
(202) 225-2161

Western Slope Office
620 E Main Street
Frisco, CO 80443
(303) 335-1045

Re: H.R. 4297 – Bolts Ditch Act

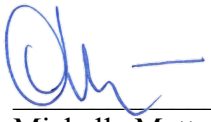
Dear Representative Neguse:

I am writing on behalf of the Town of Minturn, Colorado, ("Minturn") in support of H.R. 4297, which seeks to amend Section 1101(a) of the John D. Dingell, Jr. Conservation, Management, and Recreation Act (Public Law 116-9) to allow for the Eagle River Water and Sanitation District (the "District") and the Upper Eagle Regional Water Authority (the "Authority") to be eligible to complete the maintenance work on the Bolts Ditch and Bolts Ditch Headgate within the Holy Cross Wilderness, Colorado. Section 1101 of Public Law 116-9 as currently written restricts authority to operate Bolts Ditch within the Holy Cross Wilderness exclusively to Minturn. However, Minturn supports the District and Authority being added as permissible operators of Bolts Ditch in addition to Minturn.

The District and Authority are currently adjudicating water rights and have purchased land in order to construct and operate a 1,200 acre-foot water storage reservoir called Bolts Lake. Once constructed, Bolts Lake will provide sustainable in-basin water supplies for the region as well as additional recreation opportunities to support the recreation-based economy on the western slope. Bolts Ditch is an essential filling source for Bolts Lake. Accordingly, the District, Authority, and Minturn are seeking to expand Section 1101 to include the District and Authority as additional governmental entities that may also use, maintain, and repair Bolts Ditch and its headgate. The Minturn Town Council passed the enclosed Resolution No. 27 – Series 2022 in support of this requested amendment on June 15, 2022.

Minturn hereby supports the immediate passage of the Bolts Ditch Act as introduced to facilitate the construction and operation of Bolts Lake by the District and Authority.

Sincerely,



Michelle Metteer
Town Manager's Office
301 Boulder St., #309
Minturn, CO 81645
(970) 827-5645

Enclosure: Town of Minturn Resolution No. 27 – Series 2022; A Resolution in Support of the Amendment of Bolts Ditch Federal Legislation

COLORADO RIVER DISTRICT
PROTECTING WESTERN COLORADO WATER SINCE 1937

January 25, 2024

Via electronic mail
Congressman Joe Neguse
Washington, D.C. Office
2400 Rayburn HOB
Washington, DC 20515

Western Slope Office
620 E Main Street
Frisco, CO 80443

Re: H.R. 4297 – Bolts Ditch Act

Dear Representative Neguse:

I am writing on behalf of the Colorado River Water Conservation District ("CRWCD") in support of H.R. 4297, which seeks to amend Section 1101(a) of the John D. Dingell, Jr. Conservation, Management, and Recreation Act (Public Law 116-9) to allow the Eagle River Water and Sanitation District (the "District") and the Upper Eagle Regional Water Authority (the "Authority") to be eligible to complete the maintenance work on the Bolts Ditch and Bolts Ditch Headgate within the Holy Cross Wilderness, Colorado.

The District and Authority are currently adjudicating water rights and have purchased land in order to construct and operate a 1,200-acre-foot water storage reservoir called Bolts Lake. Once constructed, Bolts Lake will provide sustainable in-basin water supplies for the region as well as additional recreation opportunities to support the recreation-based economy on the western slope.

Bolts Ditch is an essential filling source for Bolts Lake. Section 1101 of Public Law 116-9, as currently written, allows the Bolts Ditch to be operated within the Holy Cross Wilderness area for diversion of water and use, maintenance, and repair of the ditch and headgate, but restricts such authority exclusively to the Town of Minturn ("Minturn"). Accordingly, the District, Authority, and Minturn are seeking to expand Section 1101 to include the District and Authority as additional governmental entities that may also use, maintain, and repair the Bolts Ditch and its headgate.

CRWCD hereby supports the immediate passage of the Bolts Ditch Act (as introduced) to facilitate the construction and operation of Bolts Lake by the District and Authority.

Thank you for your consideration.

Sincerely,

Andrew Mueller, General Manager
Colorado River Water Conservation District
201 Centennial Street, Suite 200
Glenwood Springs, CO 81601
Telephone: 970-930-4192

Post Office Box 975
100 Mikaela Way
Avon, CO 81620

January 24, 2024

Congressman Joe Neguse
Washington, D.C. Office
2400 Rayburn HOB
Washington, DC 20515
(202) 225-2161

Western Slope Office
620 E. Main Street
Frisco, CO 80443
(303) 355-1045

Re: H.R. 4297 – Bolts Ditch Act

Dear Representative Neguse:

I am writing on behalf of the Town of Avon, Colorado, ("Avon") in support of H.R. 4297, which seeks to amend Section 1101(a) of the John D. Dingell, Jr. Conservation, Management, and Recreation Act (Public Law 116-9) to allow for the Eagle River Water and Sanitation District (the "District") and the Upper Eagle Regional Water Authority (the "Authority") to be eligible to complete the maintenance work on the Bolts Ditch and Bolts Ditch Headgate within the Holy Cross Wilderness, Colorado.

Avon receives water and sanitation services from the District and Authority, which serve more than 50,000 customers and collectively constitute the second largest municipal water provider on Colorado's western slope. The District and Authority are currently adjudicating water rights and have purchased land in order to construct and operate a 1,200 acre-foot water storage reservoir called Bolts Lake. Once constructed, Bolts Lake will provide sustainable in-basin water supplies for the region as well as additional recreation opportunities to support the recreation-based economy on the western slope.

Bolts Ditch is an essential filling source for Bolts Lake. Section 1101 of Public Law 116-9 as currently written allows the Bolts Ditch to be operated within the Holy Cross Wilderness area for diversion of water and use, maintenance, and repair of the ditch and headgate, but restricts such authority exclusively to the Town of Minturn ("Minturn"). Accordingly, the District, Authority, and Minturn are seeking to expand Section 1101 to include the District and Authority as additional governmental entities that may also use, maintain, and repair the Bolts Ditch and its headgate.

Avon hereby supports the immediate passage of the Bolts Ditch Act as introduced to facilitate the construction and operation of Bolts Lake by the District and Authority.

Sincerely,

Eric Heil, Town Manager
(970) 748-4004

RESOLUTION NO. 07

Series of 2024

A RESOLUTION SUPPORTING PASSAGE OF THE BOLTS DITCH ACT

WHEREAS, the Town of Vail receives water and sanitation services from the Eagle River Water & Sanitation District (the "District"); and

WHEREAS, the District is adjudicating water rights and has purchased land in order to construct and operate a 1,200 acre-foot water storage reservoir called Bolts Lake; and

WHEREAS, once constructed, Bolts Lake will provide sustainable in-basin water supplies for the region, as well as additional recreational opportunities to support the western slope's recreation-based economy; and

WHEREAS, Bolts Ditch is an essential filling source for Bolts Lake; and

WHEREAS, Section 1101 of Public Law 116-9, the John D. Dingell, Jr. Conservation, Management, and Recreation Act, allows Bolts Ditch to be operated within the Holy Cross Wilderness area for diversion of water and use, maintenance, and repair of the Bolts Ditch and headgate, but restricts use, maintenance, and repair authority exclusively to the Town of Minturn; and

WHEREAS, the District, the Upper Eagle Regional Water Authority (the "Authority") and the Town of Minturn are collectively seeking to expand Public Law 116-9 to include the District and Authority as additional governmental entities that may also use, maintain, and repair the Bolts Ditch and its headgate; and

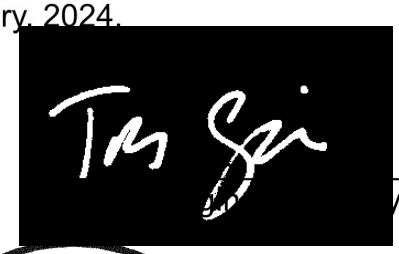
WHEREAS, the Bolts Ditch Act, introduced on June 22, 2023, in the U.S. House of Representatives by Rep. Joe Neguse (H.R.4297) and the U.S. Senate by Sen. Michael Bennet (S.2156), seeks to authorize the District and Authority to be eligible to complete the maintenance work on Bolts Ditch and its headgate within the Holy Cross Wilderness, Colorado.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF VAIL, COLORADO THAT:

Section 1. The Town of Vail hereby supports the immediate passage of the Bolts Ditch Act as introduced to facilitate the construction and operation of Bolts Lake by the District and Authority.

Section 2. This Resolution shall take effect immediately upon its passage.

INTRODUCED, PASSED AND ADOPTED at a regular meeting of the Town of Vail Town Council held this 6th day of February, 2024.



yor

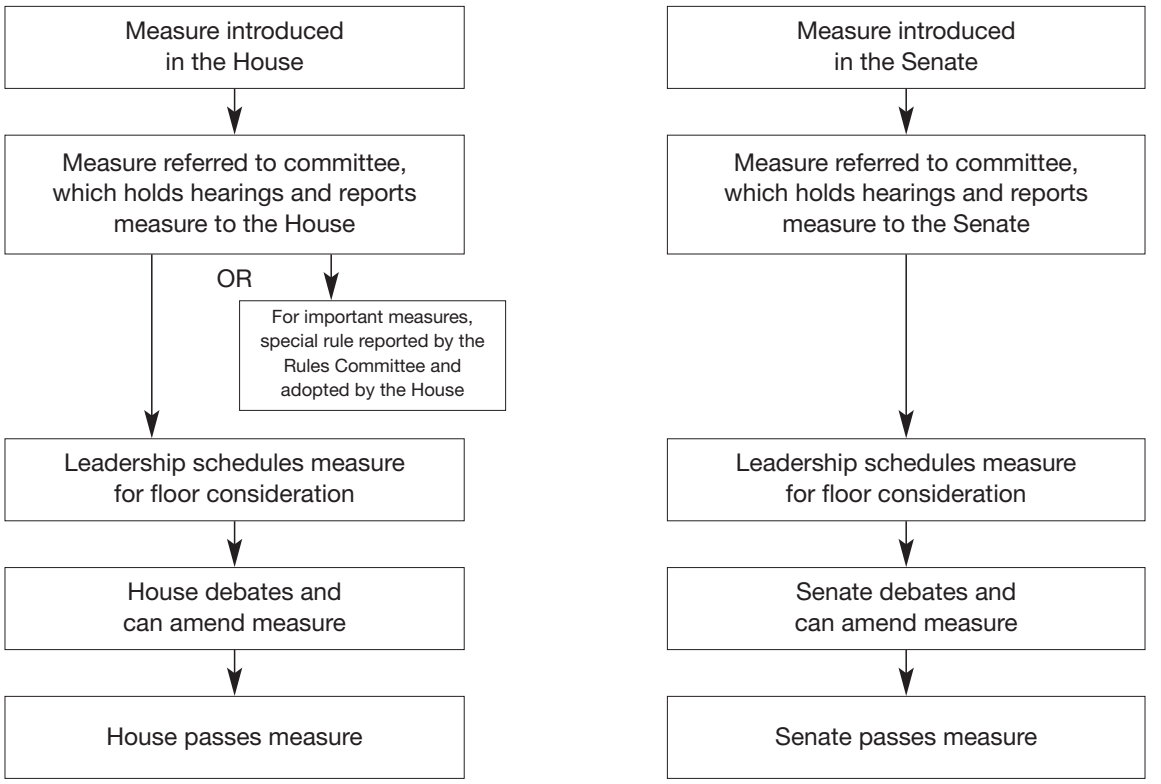
ATTEST:

Stephanie Bibbens, Town Clerk

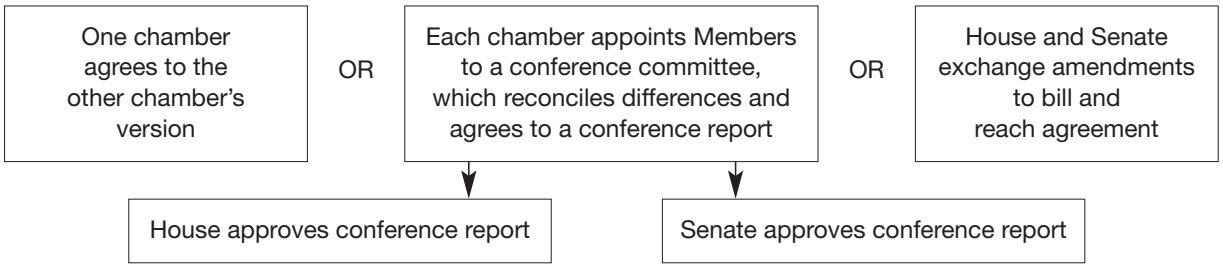
Legislative Process Flowchart fromTheCapitol.Net

LegislativeProcessFlowchart.com

Legislation may begin in either chamber. Similar proposals are often introduced in both chambers.



Measures must pass both the House and the Senate in identical form before being presented to the President.



Legislation presented to the President.

President signs measure	If President does not sign measure into law within 10 days		President vetoes measure
Measure becomes law	If Congress is in session, measure becomes law	If Congress is not in session, measure does not become law ("pocket veto")	Measure does not become law, unless both chambers override veto by 2/3 majority

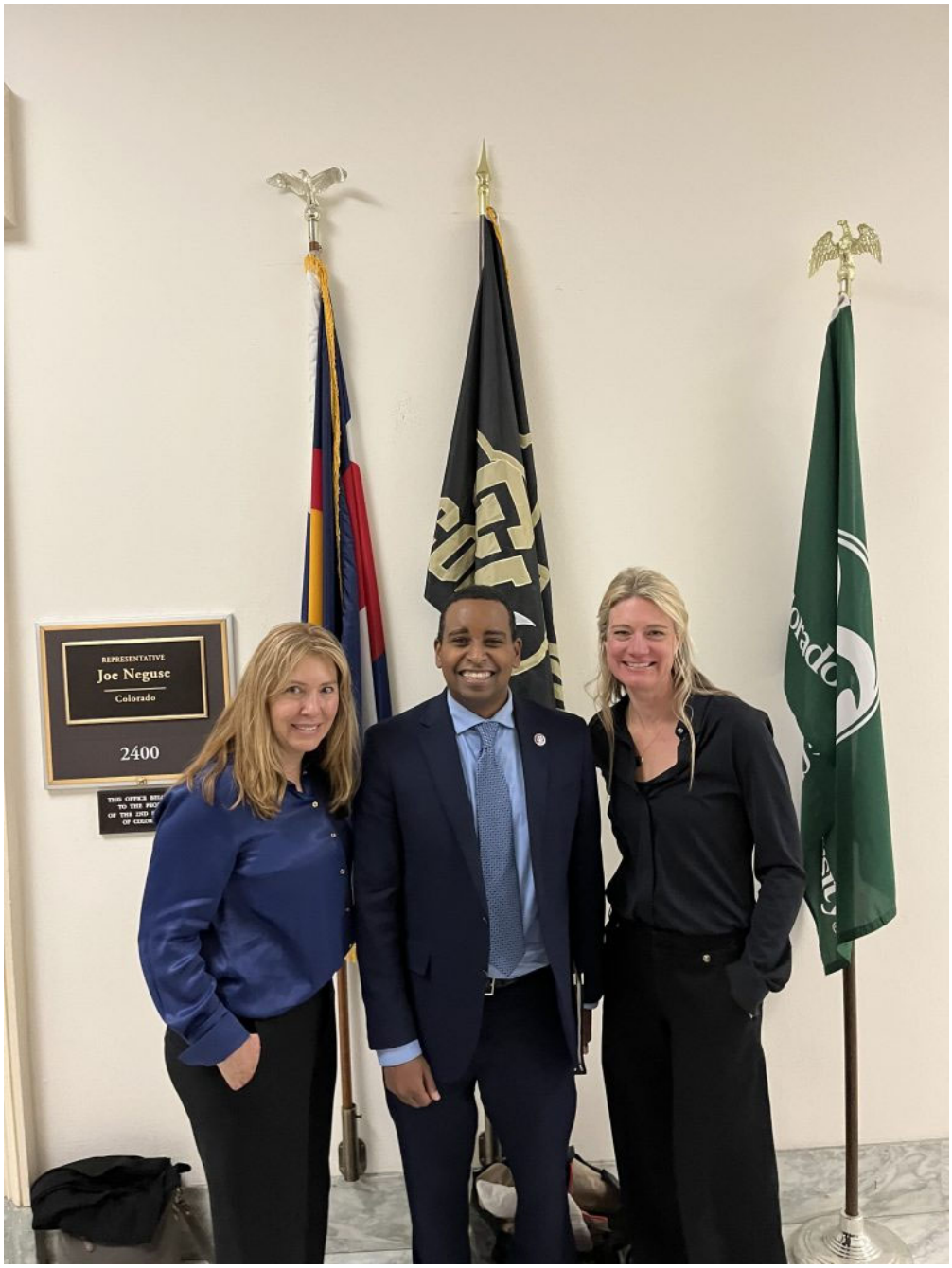
VailDaily

ERWSD general manager testifies before congressional committee re: Bolts Ditch

House Subcommittee on Federal Lands hears testimony from Eagle County water leader

News FOLLOW NEWS | Feb 1, 2024

Zoe Goldstein FOLLOW
zgoldstein@vaildaily.com



Town of Minturn manager Michelle Meteer (left) and Eagle River Water & Sanitation District general manager Siri Roman (right) took a photo with Congressman Joe Neguse (center) during their visit to Washington D.C. to testify in support of the Bolts Ditch Act, a bipartisan bill supported by Neguse that would enable the district to use Bolts Ditch to fill Bolts Lake.
Eagle River Water and Sanitation District/Courtesy photo

On Wednesday, Jan. 31, the Subcommittee on Federal Lands of the House Committee on Natural Resources held a hearing that included the Bolts Ditch Act. The act would allow the Eagle River Water and Sanitation District and the Upper Eagle Regional Water Authority to use, repair and maintain Bolts Ditch.

Siri Roman, general manager of the district and authority, testified before the subcommittee in support of the act.

Bolts Ditch was mistakenly included within the Holy Cross Wilderness when it was mapped in 1980. This prevented local municipalities from maintaining and using the ditch, which was created to fill a water storage reservoir that was originally constructed in the early 1900s.

“While the Bolts Ditch diversion structure is only 450 feet within the Holy Cross boundary, the wilderness designation prevents its continued use, maintenance, and repair,” Roman said in her testimony.

Rep. Joe Neguse, who represents Colorado’s 2nd District, which includes most of Eagle County, authored legislation to permit special authorization to the town of Minturn for nonmotorized access to use, maintain, and repair the Bolts Ditch structure. That legislation, part of the the John D. Dingell, Jr. Conservation, Management, and Recreation Act was passed in 2019 by Congress and signed into law.

In 2021, the Eagle River Water and Sanitation District and the Upper Eagle Regional Water Authority bought the rights to Bolts Ditch and Bolts Lake with the intention to create a reservoir capable of storing up to 1,200 acre feet of water.

Eagle County is located at the headwaters of the Colorado River basin, and receives approximately 80% of its precipitation in the form of snowfall, Roman said in her testimony. As a result, “the vast majority of the annual water supply reaches our local stream systems within a very short period of time during spring snowmelt. A reservoir to capture the spring runoff is essential to provide water on a year-round basis for our residents and visitors,” Roman said.

Bolts Ditch, Roman said, “is an essential filling source for the new Bolts Lake Reservoir.”

The Bolts Ditch Act, H.R. 4297, is an amendment to the Dingell Act that would authorize the Eagle River Water and Sanitation District and the Upper Eagle Regional Water Authority to operate, maintain, and repair Bolts Ditch through nonmotorized means. The Bolts Ditch Act was first introduced into the House of Representatives by Neguse and Doug Lamborn, who represents Colorado’s fifth district in the House, on June 22, 2023.

“The Bolts Ditch Act is simple. It’s a simple amendment to the Dingell Act, granting the district and authority the same access as the town of Minturn,” Roman said.

The town of Minturn showed its support for the Bolts Ditch Act both in writing and in person. Minturn Town Manager Michelle Meteer accompanied Roman to Washington, and was in the room during the hearing.

“What benefits do you think would flow from this particular change to Eagle County, writ large?” Neguse asked Roman.

“As we know, the water picture is very variable in the West … and what this will do is help us store that snowmelt so that we can release it, because it is drier, warmer, we’re having longer summers,” Roman replied.

“And then we can release those flows and augment our rivers in the fall. Really, the whole Colorado system will benefit from this project,” Roman said.

“I think the bill makes a lot of sense, and I’m hoping we can get it done in short order,” Neguse said.

Return to agenda

Bushong & Holleman PC

A t t o r n e y s · a t · L a w

1525 Spruce Street, Suite 200, Boulder, Colorado 80302

TO: Boards of Directors for the Eagle River Water & Sanitation District and the Upper Eagle Regional Water Authority.

FROM: Steve Bushong

DATE: February 15, 2024

RE: PFAS Update Memorandum

As discussed in the last PFAS update, my office assisted Marten Law (special counsel) in pulling together the needed information for ERWSD and UERWA to opt-out of the 3M and DuPont class actions settlement agreements and Marten Law timely filed the opt-outs in both cases. Originally, there was considerable chaos over the fact that a large number of opt-outs were apparently not being accepted or were being challenged by Class Counsel for technical reasons and the court had to intervene. That issue has largely been resolved and we are confident that the ERWSD and UERWA opt-outs are or will be accepted.

The court held "fairness hearings" for both the DuPont and 3M class action settlements. Marten Law argued at the fairness hearings and raised some of the specific concerns that ERWSD and UERWA had raised, such as the scope of the release, the potential for the release to capture wastewater, and the claims-over provision that could shift PFAS liability. While the court was supportive of the class action settlements during the hearings, it took the concerns under advisement and recommended that class counsel and objectors work together on any amendments to the class action settlements.

Although ERWSD and UERWA opted out, to the extent the settlement agreements are materially changed before March 1, 2024, we will let you know. The court has extended the opt-back-in date to March 1 for both the 3M and DuPont settlements and if some of your concerns are addressed before then you may want to revisit the issue.

We are also communicating with Marten Law to assess what other options may exist now or in the future to seek compensation for PFAS costs outside of the 3M and Dupont settlements. We will keep you appraised of such options.