



**UPPER EAGLE REGIONAL  
WATER AUTHORITY**

**M E M O R A N D U M**

**TO:** Board of Directors  
**FROM:** Diane Johnson, Communications & Public Affairs Manager  
**DATE:** March 17, 2022  
**RE:** March 24, 2022, Board Meeting

**GOVERNED BY:**

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

The Town of Avon

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

**Thursday, March 24, 2022  
8:30 a.m.**

**This meeting will be held via Microsoft Teams**

Call-in information is available prior to the meeting by emailing [info@erwsd.org](mailto:info@erwsd.org).

**C:**  
ERWSD Managers

Board Materials via Email:  
Caroline Bradford, Independent Consultant  
Steve Coyer, Mountain Star  
Melissa Nelson, Berry Creek Metropolitan District  
Bill Simmons, Beaver Creek Metropolitan District



**UPPER EAGLE REGIONAL  
WATER AUTHORITY**

**BOARD OF DIRECTORS REGULAR MEETING**  
Thursday, March 24, 2022  
**8:30 a.m.**  
Remote via Microsoft Teams

**AGENDA**

**GOVERNED BY:**

The Metropolitan  
Districts of:

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Beaver Creek

Berry Creek

EagleVail

Edwards

The Town of Avon

- 1. Consultant/Guest Introduction**
- 2. Public Comment**
- 3. Action/Other Items**
  - 3.1. Minutes of Meetings – Approval or Modification**
    - 3.1.1. Minutes of Feb.24, 2022, Regular Meeting
  - 3.2. Information Reports**
    - 3.2.1. Development Report
    - 3.2.2. Board Committees
    - 3.2.3. Authority February Meeting Summary – draft
    - 3.2.4. Contract Log (none this month)
- 4. Strategy Items**
  - 4.1. Board Member Input
- 5. General Manager Report**
  - 5.1. GM Information Items
  - 5.2. Operations Report – Siri Roman
  - 5.2.1. Avon Wastewater Nutrient Upgrade Project Update – Melissa Marts
  - 5.3. Engineering and Water Resources Report – Jason Cowles
  - 5.3.1. Unallocated water update
  - 5.4. Communications and Public Affairs Report – Diane Johnson
- 6. General Counsel Report – Jim Collins**
- 7. Water Counsel Report – Kristin Moseley**
- 8. Executive Session pursuant to §24-6-402(4)(b) and (e), C.R.S.**
  - 8.1. Special Water Counsel Review of Matters in Negotiations – Glenn Porzak
    - 8.1.1. Colorado River Cooperative Agreement matters
    - 8.1.2. Eagle Park Reservoir water right cases
    - 8.1.3. Cordillera water service report
  - 8.2. Water Counsel Review of Matters in Negotiation – Kristin Moseley
    - 8.2.1. Brett and Creamery Ditch decision
  - 8.3. General Counsel Review of Matters in Negotiation – Jim Collins
- 9. Adjournment**


☀ Action Item Attachment

\* Informational Attachment

† Confidential Attachment

- Public comment of items not on the agenda is limited to three minutes per person on any particular subject for which public comment is accommodated, pursuant to §18-9-108, C.R.S.

**This is an all-remote meeting.** For Microsoft Teams information to join the meeting, please contact [info@erwsd.org](mailto:info@erwsd.org) prior to the meeting.

New Development Report March 2022								
		Type of Use	SFEs Proposed	Location	Projected Water Demand Annual Acre-Feet Augmentation (AF)	Development Approval Process Step:	Construction Approval Process Step:	
Projects Requiring Water Rights Dedication	Authority							
	Edwards River Park PUD	Mixed Use	440+com	Edwards	61.8	3. Cond. Capacity	0. Conceptual	
	Mountain Hive	Residential	188	Edwards	10.5-15.2	3. Cond. Capacity	0. Conceptual	
	NorthStar PUD Amendment	Commercial	TBD	Edwards	3.7	5. Water Service Agreement	1. Plan Review	
	Riverwalk Edwards Ammendment	Residential	18	Edwards	1.8	3. Cond. Capacity	N/A	
	Vogelman Parcel (Carwash)	Mixed Use	1.5	Edwards	1.1-2.6	2. Water Analysis	1. Plan Review	
	Warner Building 2 Conversion	Residential	13.25	Eagle-Vail	0.07	3. Cond. Capacity	N/A	
	West End PUD Ammendment	Residential	335	Edwards	34.3	2. Water Analysis	0. Conceptual	
	District							
	534 E Lionshead Circle - Elevation	Residential	12	Vail	0.49	2. Water Analysis	0. Conceptual	
	500 E Lionshead Circle - Legacy	Residential	23	Vail	0.31	2. Water Analysis	1. Plan Review	
	Alura (Miradoro)	Residential	10	Vail	0.83	1. Connection Application	1. Plan Review	
Projects Under Construction	Authority							
	Avon Hotel Development (Traer Tract J)	Commercial	85.05	Avon	--	6. Ability to Serve Letter	1. Plan Review	
	CVC Clubhouse Residences	Residential	9	Edwards	1.34	6. Ability to Serve Letter	2. Plan Approval	
	140 W Beaver Creek Blvd	Residential	112	Avon	--	N/A	0. Conceptual	
	185 Elk Track	Residential	4	Beaver Creek	--	N/A	4. Warranty Period	
	6 West Apartments (formerly Via)	Residential	120	Edwards	12.56	6. Ability to Serve Letter	4. Warranty Period	
	ECO School District Housing	Residential	37	Edwards	3.7	1. Connection Application	2. Plan Approval	
	Fox Hollow Amended PUD	Mixed Use	108	Edwards	14	6. Ability to Serve Letter	1. Plan Review	
	Frontgate (CO World Resorts)	Mixed Use	84	Avon	2.6	6. Ability to Serve Letter	1. Plan Review	
	Kudel Parcel	Residential	4	Edwards	2.4	6. Ability to Serve Letter	1. Plan Review	
	Maverik Gas Station	Commercial	2.6	Avon	1.03	6. Ability to Serve Letter	2. Plan Approval	
	McGrady Acres	Residential	28	Avon	--	N/A	1. Plan Review	
	Piedmont	Residential	240	Avon	--	N/A	4. Warranty Period	
	Riverfront Lot 1	Residential	53	Avon	53	N/A	2. Plan Approval	
	Riverfront Village	Residential	59	Avon	--	N/A	4. Warranty Period	
	Stillwater	Residential	21	Edwards	1.7	6. Ability to Serve Letter	4. Warranty Period	
	Stolport Restaurant	Commercial	TBD	Avon	--	6. Ability to Serve Letter	1. Plan Review	
	Swift Gulch	Residential	42	Avon	Under Review	1. Connection Application	0. Conceptual	
	Tract Y- Metcalf Road	Residential	52	Avon	Under Review	1. Connection Application	1. Plan Review	
	District							
	3010 Basingdale (Phase II)	Residential	2	Vail	--	N/A	4. Warranty Period	
	841/851 Main St Minturn	Residential	4	Minturn	--	N/A	4. Warranty Period	
	Belden Place (1200 Block Main St)	Residential	41	Vail	N/A	N/A	2 Plan Approval	
	Highline (Double Tree Expansion)	Residential	43.65	Vail	0.79	6. Ability to Serve Letter	1. Plan Review	
	North Minturn PUD	Residential	184	Minturn	--	N/A	1. Plan Review	
	Red Sandstone Parking Garage	Infrastructure	N/A	Vail	--	N/A	4. Warranty Period	
	The Residences at Main Vail	Residential	72	Vail	0.81	6. Ability to Serve Letter	1. Plan Review	
	S. Frontage Rd Roundabout	Infrastructure	N/A	Vail	--	N/A	2. Plan Approval	
	Vail Mountain View Phase II	Mixed Use	37	Vail	--	6. Ability to Serve Letter	N/A	
	VVMC Phase II-East Wing	Commercial	--	Vail	--	N/A	2. Plan Approval	
	Vail Marriott Residence Inn	Mixed Use	75	Vail	--	N/A	2. Plan Approval	
	Process	Construction Approval Process Steps:	0. Conceptual	1. Plan Review	2. Plan Approval	3. Acceptance	4. Warranty Period	5. Final Acceptance
		Development Approval Process Steps:	1. Connection Application	2. Water Demand Worksheet Analysis	3. Conditional Capacity to Serve Letter	4. Water Rights Allocation	5. Water Service Agreement	6. Ability to Serve Letter



## BOARD COMMITTEES

### DISTRICT

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

### JOINT

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

(A) = Authority, (D) = District

### AUTHORITY

<i>Audit/Budget</i>	Geoff Dreyer George Gregory
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The Town of Avon

**MEMORANDUM**

**TO:** Board of Directors  
**FROM:** Diane Johnson, Communications & Public Affairs Manager  
**DATE:** Mar. 17, 2022  
**RE:** Summary of Authority's Feb. 24, 2022, Board Meeting

The following is a summary of items discussed at the Feb. 24, 2022, Authority Board Meeting.

Board members present and acting were Chair George Gregory, Vice-Chair Sarah Smith Hymes, Secretary Kim Bell Williams, Treasurer Geoff Dreyer, and Pam Elsner.

**Meeting Minutes** The board approved the minutes from the Jan. 27, 2022, regular and joint meetings.

**Rules and Regulations** The board approved revisions to various articles and appendices in the Rules and Regulations.

**NorthStar PUD** The board approved a \$146,524 cash payment in lieu of the NorthStar PUD Amendment's 4.44 acre-feet water rights dedication requirement and instructed staff to execute a Water and Wastewater Service Agreement for the Development.

**Bolts Lake Closing** George Gregory congratulated consultants and staff for their work on this important water supply project.

**ERWSD Board Election** Sarah Smith Hymes asked about the timing of the "Call for Nominations" related to the May 3 Eagle River Water & Sanitation District board of directors' election. Diane Johnson said the required legal notice was published Feb. 3 and general announcements were made on the February billing statements, local radio, and a Feb. 21 news release.

**Sustainability update** Kira Koppel summarized various climate challenges and reviewed organizational accomplishments made in 2021 including various certifications and awards, local events, greenhouse gas emission reductions, employee engagement, and revenue made from sustainability programs.

**COVID-19 update** Linn Brooks relayed local COVID-19 trends and said the staff incident response team had decided to maintain mask wearing onsite for a while longer.

**Gore Creek Watershed Source Water Protection Plan** Leah Cribari and Kailey Rosema summarized the work, partners, funding, regulatory framework, background, and findings of the Source Water Protection Plan for the Gore Creek watershed. Work will start this year for the Authority's service area, to create an Eagle River watershed Source Water Protection Plan.

**Frozen Service Lines** Siri Roman said that Field Operations staff is dealing with an uptick of frozen service lines this winter. Possible causes include lack of insulating snow and aging infrastructure.

**Unallocated water** Jason Cowles said the unallocated water amounts were adjusted based on the final calculations for the NorthStar PUD. The Authority has 54.31 acre-feet of unrestricted water remaining, which includes 25AF pledged by the District.

<b>Climate Speaker Series</b>	Diane Johnson reminded directors that Linn Brooks was speaking at the Feb. 24 Walking Mountains Science Center's Climate Speaker Series which could be attended in person at Colorado Mountain College or viewed on <a href="#">YouTube</a> .
<b>Legislative Update</b>	Kristin Moseley reported on <a href="#">HB22-1151</a> Turf Replacement Program, <a href="#">SB22-029</a> Investment Water Speculation, and the not yet introduced Recreation In-channel Values Reach (RIVR) legislation.
<b>Hill v Warsewa case</b>	Kristin Moseley updated directors on the recent 10 <sup>th</sup> Circuit decision. The board approved \$500 for the Colorado Water Stewardship Project to help fund a Colorado Water Congress amicus brief in support of the state's position.

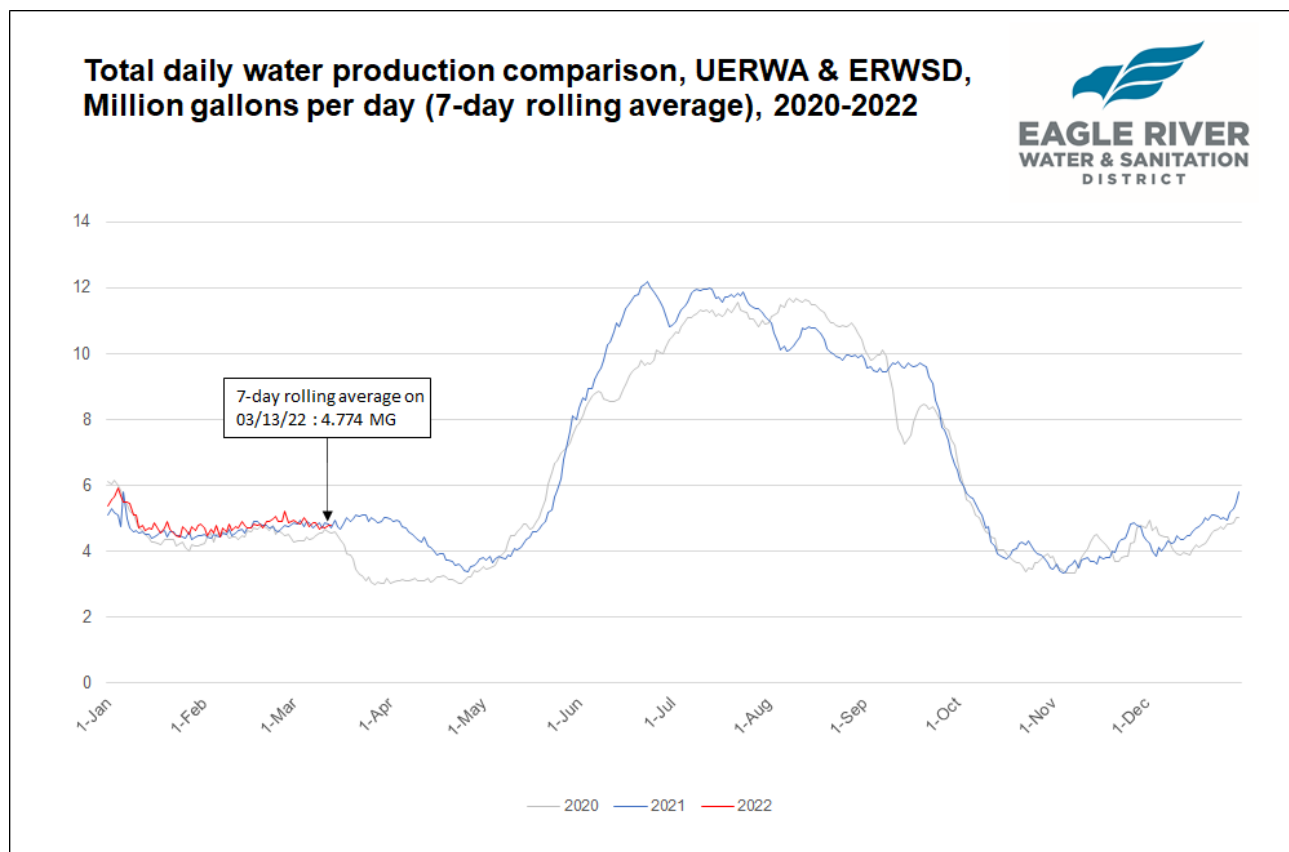


## OPERATIONS MONTHLY REPORT March 2022

### WATER

Brad Zachman

The system-wide water production comparison was updated through Mar. 13. System production is normal for this time of the year. The annual intersystem transfers are on pace to be at the required net-zero balance by April 30 (the end of District's/Authority's contract year).



The Edwards Drinking Water Facility (EDWF) was taken offline the week of March 6 as a proactive regulatory compliance strategy to help control disinfection byproduct (DBP) formation in the Cordillera area. DBP levels have steadily increased in the Cordillera area over the past 12 months because the primary groundwater source has been out of service for construction of the new Fenno Wellhouse. DBP levels are typically lower for groundwater sources (compared to surface water) because the

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concentration of organic precursors is relatively lower. With EDWF offline, a greater proportion of groundwater from the Berry Creek Wells will be introduced to the Cordillera area—a strategy that is expected to reduce DBP levels prior to the next compliance sampling period.

The 2022 water storage tank CIP project is underway. The project includes overflow and hatch improvements at 12 water storage tanks. The hatches were delivered last week. The project will be phased to prioritize work at the sites in the District system prior to the upcoming CDPHE Sanitary Survey. Work at the District sites will be complete by the end of June. Authority work will be completed by the end of September.

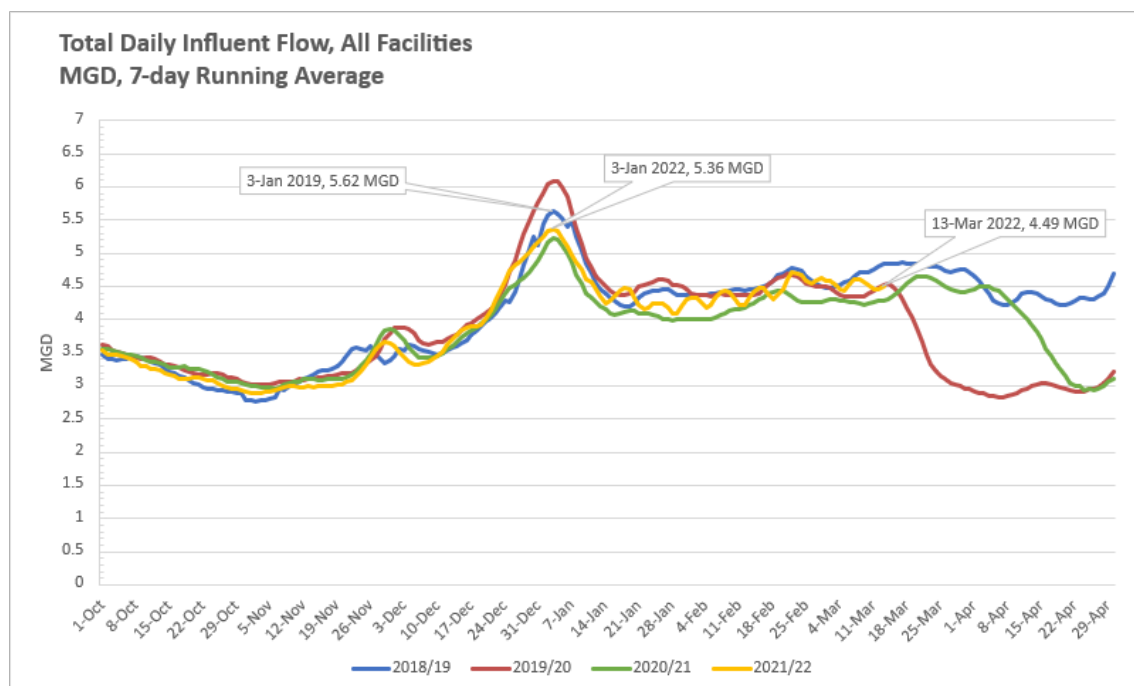
Water Department staff members are assisting with a variety of other ongoing capital improvement projects, including Fenno (Cordillera) Treatment Facility Replacement (commissioning Spring 2022), ADWF Programmable Logic Controller (PLC) improvements (project out for bid), Water Treatment and Production Master Plan (kickoff meeting held Mar. 11), and the Traer Creek Water Storage Tank (commissioning Spring 2022).

Vail groundwater well R4 remains out of service for motor and pump replacements. The pump and motor were removed the week of Feb. 15 and the well casing was video inspected the week of Feb. 21. The video inspection revealed a hole in the screen that needs to be repaired before the pump and motor can be reinstalled. Staff members are currently coordinating the screen repair and plan to have the work complete before the peak production season.

## WASTEWATER

Rob Ringle

Total influent flows and loading to the three wastewater (WW) facilities has remained within recent historic trends over the past month. The Mar. 13 7-day average total influent flow of 4.49 MGD represents 84% of the peak 7-day average total influent flow, which was observed on Jan. 3.



We anticipate that influent flows will remain similar to present values until mid-April, when ski operations in the valley approach their conclusion for the season.

Avon WW staff continue to adapt facility operations to meet the changing demands of the Nutrient Upgrade Project. This includes optimization of the new aeration equipment and control programming for the newly commissioned Aeration Basin #2 train. The facility has continued to meet effluent limits through the commissioning and optimization process. Staff are also contributing efforts related to bringing the renovated (south) primary clarifier online, and taking the presently in-service (north) primary clarifier offline to facilitate work in that basin. Planning efforts are in progress for several significant process-related events that will take place in the upcoming spring and summer.

The Edwards WW facility suffered a localized power failure on Friday, Mar. 11, which impacted the headworks building and influent pump station. An electrical coordination issue caused the power to fault at the 600 amp building feeder breaker instead of the downstream breaker for the piece of equipment that was later determined to be faulty. The expected alarms did not present due to the concurrent loss of power to essential network switches. IT department staff first noticed the issue due to the loss of network communications with the programable logic controller (PLC) within the headworks building. WW, IT, OTS, and Field Operations groups responded. Bypass pumping was established with a trailer-mounted pump and 6" hose to convey sewage from the upstream manhole (onsite) to the influent channel, upstream of the bar screens. In this time, the sewage had surcharged to a surface elevation of roughly 10' above the normal operating level. Automatic operation of the influent pump station was partially restored by the early morning of Mar. 12.



*Responders from IT, OTS, Wastewater, and Field Operations worked in earnest to setup bypass pumping.*



*Cleanup of influent pump station began immediately after the sewage had been drained below the floor elevation.*

The cause of the incident is believed to be an electrical coordination issue. An electrical heater in the grit dumpster area has since been identified as faulty. It appears that the fault of this piece of equipment tripped the 600 amp building feeder breaker instead of the individual breaker for that item as designed. As of March 15, the facility has been largely restored to the previous level of service. Changes have been made to the power supply serving the network equipment to help mitigate the risk of a repeat incident. Incident debrief work is underway; several additional corrective actions will be pursued.

#### FIELD OPERATIONS

Niko Nemcanin

Staff organized and hosted trenching and shoring safety training, and two mandatory regulatory trainings for the crew. Most of crew is now National Association of Sewer Service Companies (NASSCO) re-certified.

Crew responded to frozen water and sewer service lines in East Vail. More information about frozen lines will be presented at the April board meeting.

On Sunday, Feb. 20, crew responded to a water leak on Legacy Trail in Cordillera Valley Club. Crews determined that the source of the leak was on the District's side of the service line. A contractor was mobilized as the leak was in a difficult location under electrical conduits; service was restored the same day.





*Legacy Trail Service Line Repair*

## UTILITY SERVICES

Shane Swartwout

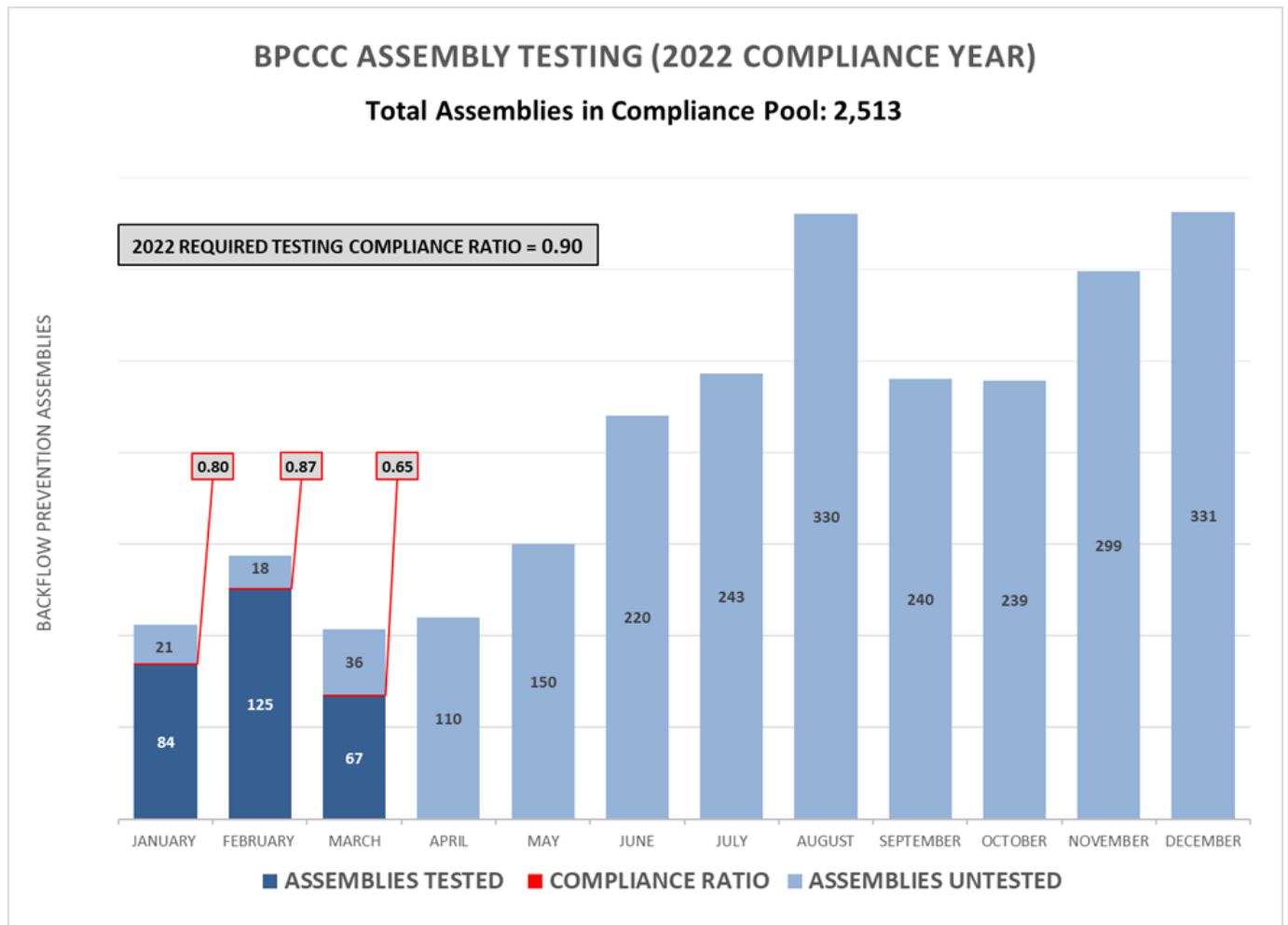
### **Backflow Prevention and Cross Connection Control**

To meet the new regulatory compliance requirement, the BPCCC team has been focused on the 199 assemblies that did not get tested in 2021. There are currently only six assemblies remaining and they have all been scheduled to be tested by the March 30 deadline.

Staff has completed testing on all the backflow prevention assemblies located at our wastewater facilities. This work was previously outsourced to a contractor but over the past two years we have tested these assemblies inhouse by our certified staff. The Utility Services department now has six staff members who are ASSE certified to test backflow prevention assemblies.

As shown on the chart below, staff is making good progress regarding assembly testing for the first three months of the compliance year. Customers are currently being fined for the January assemblies that have not been tested (21 total) and we have notified the customers who are past due for February assembly testing (18 total). Our goal is to reach the required 0.90 compliance ratio on a monthly basis throughout the year.

## BPCCC Program Compliance Status (Updated 3-15-2022)



### Meter Services – Advanced Metering Infrastructure Status (Updated 3/15/2022)

Meter services has been experiencing supply chain issues, specifically regarding water meters, transmitters, and associated meter parts. This shortage has caused the team to be very conservative with the existing meter inventory. Only 29 meters were replaced in February and to date the team has replaced 27 meters and upgraded 36 transmitters in the month of March. The increase in production this month is due to receiving two relatively small shipments of meters and transmitters. Our meter vendor has yet to provide us with supply availability or lead times for delivery.

Report Date:	3/15/2022
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AMI SYSTEM STATUS	ERWSD	UERWA	TOTAL
(1) Total No. of Meters	3183	6796	9979
(2) No. of AMI Meters	2732	5491	8223
(3) System Percentage of AMI Meters	86%	81%	83%
Meters Remaining to Reach 100% AMI	451	1305	1756

### Fleet and Facilities

Fleet and Facilities has secured a service contract with Workforce Solutions LLC, to provide professional cleaning services at ADWF, AWWF, EDWF, EWWF, Traer Creek, and the Vail Administration building. This month the team will also complete ordering replacement vehicles for budget year 2022. There is a total of six vehicles that will be ordered, including two electric vehicles and two plug-in hybrid electric vehicles.

### ENGINEERING

Jeff Schneider

### WATER PROJECTS

#### Radio Telemetry Unit (RTU) System Upgrades

Carter Keller

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

Project Update: Phase 3 submittals, procuring equipment, and building the RTU panels are underway and will continue through Q12022 with Factory Acceptance Testing (FAT) to follow.

### **Traer Creek Water Storage Tank**

Mark Mantua

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

Project Update: Electrical improvements and telemetry installation are underway. District OTS staff is coordinating with the contractor to ensure the controls interface is implemented per new district standards. District staff filled the tank for leak testing in January. The tank passed all portions of the leak test. The contractor is currently backfilling around the tank and restoring the site to its original elevation. District staff is currently reviewing closeout documentation provided by the contractor. This project is under budget and on track to be substantially complete in late spring 2022.

### **Avon Drinking Water Facility (ADWF) PLC Upgrades**

Jenna Beairsto

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

Project Update: The project was advertised for bidding on Feb. 24 and Mar. 3. The mandatory pre-bid meeting was held on Mar. 8 with electrical and I&C contractor participation. Addendum 1 was issued to plan holders on Mar. 11. Bids are due on Mar. 31. Construction is expected to begin in late spring or early summer of 2022.

### **Edwards Spur Road Phase 2 Water Main**

Mark Mantua

General Project Scope: The Edwards Spur Road Phase 2 consists of two projects. The first is installation of 1,700 linear feet of water main that was installed in conjunction with the CDOT Edwards Spur Road project. The second is installation of a water main that will run parallel and under the railroad tracks to connect the Edwards Drinking Water Facility to the water main that was previously installed during the 2019 Spur Road project and to a main near Miller Ranch Road. The project will alleviate hydraulic issues in the Edwards low pressure zone.

Project Update: The project is in winter shutdown and an update will be provided once work resumes. We anticipate that the contractor will mobilize approximately the first week in April.

## **Fenno Wellhouse and Raw Water Conveyance**

Jeffrey Schneider

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

Project Update: Electrical equipment delays have pushed the project schedule beyond March. The main distribution panel (MDP) continues to be delayed and manufacturers and vendors continue to cite the pandemic supply chain issues as the cause. The panel runs the power for the entire station; startup of systems cannot occur until it is installed. The pump station construction requires that water from the Edwards low zone be pumped into Cordillera. This operational configuration is fine during high-demand summer months but with low demands in winter, we are running into compliance issues for disinfection byproducts since the valley floor water source is surface water rather than groundwater. To help with compliance, the contractor team is facilitating a partial startup of the wellhouse with a temporary panel feeding two of the four distribution pumps. We anticipate 'partial' startup to occur the week of Mar. 28, with full startup anticipated in April once the permanent power panel arrives.

The project also includes work at each of the seven groundwater wells feeding the wellhouse. Staff has prepared correspondence and easement documentation for accessing the wells for inspection and design. We received a response from Cordillera Metro District (CMD) personnel on our easement and access needs for the wells and it is initially positive. We will need to remove some trees and are working up a new easement for access to Well F2. Once the work plan comes together for fieldwork, we will work hand in hand with CMD and the homeowners for tree removal and well inspection.

## **Water Production and Treatment Masterplan**

Jenna Beairsto

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

Project Update: Carollo was selected for this work based on their submitted Statements of Qualifications (SOQ). The review team scored them unanimously the highest and as a result the team decided to forego the short list/interview process. A scoping meeting was held between the Carollo and District team on Mar. 1. A scope of work is expected from Carollo by Mar. 31. The draft scope from Carollo will be used to finalize the scope of work for the project and begin fee negotiations, after which we will kick off the project.



## Arrowhead Transmission Main & Valve Vault

Mark Mantua

General Project Scope: This project consists of the replacement of 2,300 linear feet of water transmission main and a valve vault which both serve Arrowhead Tank 1. The existing ductile iron transmission main pipe is severely corroded and is nearing the end of its service life. The valve vault will reduce operational issues in the water distribution system. The new valve vault will include a new flow control valve allowing Arrowhead Tank 1 to hydraulically balance better with the Cordillera Valley Club (CVC) tank.

Project Update: District staff has decided to review an alternate alignment for this project. The original project scope included replacement of pipeline under a ski run, with new pipe installed in the same location. An alternate alignment proposed by the Construction Review Team would move the pipeline from the ski run to Cresta Road. The major advantage to the new Cresta Road alignment is eliminating a creek crossing. Additional survey and geotechnical work is underway along the Cresta Road alignment. Once this survey and geotech work is complete, the design engineer will provide a recommendation and District staff will chose the future alignment.

## Avon Wastewater Treatment Facility (WWTF) Fire Flow Improvements

Melissa Marts

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

Project Update: This project will be administered under a change order to the Avon WWTF Nutrient Upgrades Project. The proposal for the work has increase over the engineer's estimate due to changing market conditions and a budget transfer request will be submitted for this project. We anticipate construction to occur late summer/early fall 2022.

## WASTEWATER PROJECTS

### Avon Wastewater Treatment Facility (AWWTF) Nutrient Upgrades

Melissa Marts

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

Project Update: A separate memorandum will be included in the March board packet and a update will be presented during the March District and Authority board meetings.

## **Dowd Junction Collection System Improvements**

Jenna Beairsto

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

Project Update: *West Vail Interceptor Aerial Crossing:* Ductile iron pipe was delivered and is being stored at the contractor's storage yard offsite. The first segment of the bridge has been fabricated and the second segment is currently being fabricated. Remaining materials are scheduled to be delivered in Mar. 2022. The contractor will mobilize to the site in late May to complete the project. The District executed a change order to update the contract completion dates with the Contractor based on global supply chain issues.

*Lift Station 4 and Force Main Replacement:* This project combines three packages of work into one large project. Package A includes the Lift Station 4 replacement, Package B is replacement of the exiting force main with two 8" HDPE force mains, and Package C in partnership with Eco Trails (Eagle County) to connect the bike trails from the lift station to the West Vail Interceptor crossing. HDR, Murraysmith and Otak submitted the issued for bid (IFB) set of drawings and specifications for each of the three packages associated with this project. The project was advertised to bidders on Feb. 10 and Feb. 17. The bid date has been pushed back to Mar. 31 due to a delay in the mandatory pre-bid meeting caused by adverse weather conditions. The pre-bid meeting was well attended by 10 general contractors as well as subcontractors interested in the project.

## **Avon Lab Improvements**

Melissa Marts

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

Project Update: Moltz is finalizing their proposal for the work but has already requested submittals for the HVAC equipment to help with the long lead time of this equipment. Contingent upon successful negotiation, work is anticipated to be underway in the summer of 2022.

## **Vail Wastewater Treatment Facility (VWWTF) Master Plan Improvements**

Melissa Marts

General Project Scope: A condition assessment of the Vail WWTF conducted as part of the 2017 Master Plan identified various upgrades required to keep the facility in reliable and operable condition. The scope includes a new, larger diesel generator and associated electrical, structural

repairs in the aeration basin, equalization, and clarifier rooms, replacement of the aging ultraviolet (UV) system, and construction and installation of an external facility bypass.

**Project Update:** Construction manager at risk (CMAR) solicitation documents were issued Jan. 28. CMAR proposals were received from PCL and Filanc. The project team is conducting interviews with the two firms on Mar. 18, after which we will make a selection and begin the pre-construction phase services. In addition, we are working with our legal team to include equipment procurement in the preconstruction services rather than the construction phase to better align with the project schedule. The project team is reviewing the 30% design deliverables and continues progressing design with Black and Veatch. Due to the long lead time of equipment, construction is anticipated in fall 2022 and continuing throughout 2023.

## GENERAL CAPITAL

### Vail Office Remodel

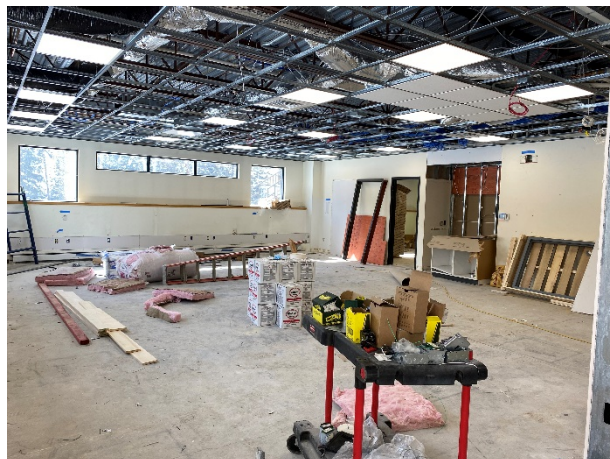
Jenna Beairsto

**General Project Scope:** The project will provide a safe and secure singular entry point for facility visitors by reconfiguring the vestibule entrance. The scope also includes reconfiguring and reorganizing of the Vail Administration Office. Most of the construction will be concentrated on the south half of the first floor; however, reorganization will occur building wide. In addition to the front entrance, the project will provide improved ADA access to the building. Several departments will shift within the lower level to allow for additional office and meeting space. The project includes cubicle and office furniture purchase and replacement for some of the improved areas.

**Project Update:** The Contractor has completed rough-in for the electrical and HVAC upgrades. The crews have begun hanging drywall in the construction area. Tile has been installed for the front entry and new mail room. Installation of new door frames has begun. After the drywall and texture is applied, the first coat of paint will go on the walls and carpet will be installed in the new workspaces.



*Progress in the new customer service area*



*Progress in the new utility services area*

## WATER RESOURCES

Len Wright

The latest Drought Monitor shows that Colorado remains out of category “D4-Exceptional Drought”, as shown below in Figure 1. Eagle County is nearly 100% category “D1-Moderate Drought”, as shown below in Figure 2.

Figure 1. Colorado Drought Monitor, Mar. 8, 2022.

(<https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CO>).

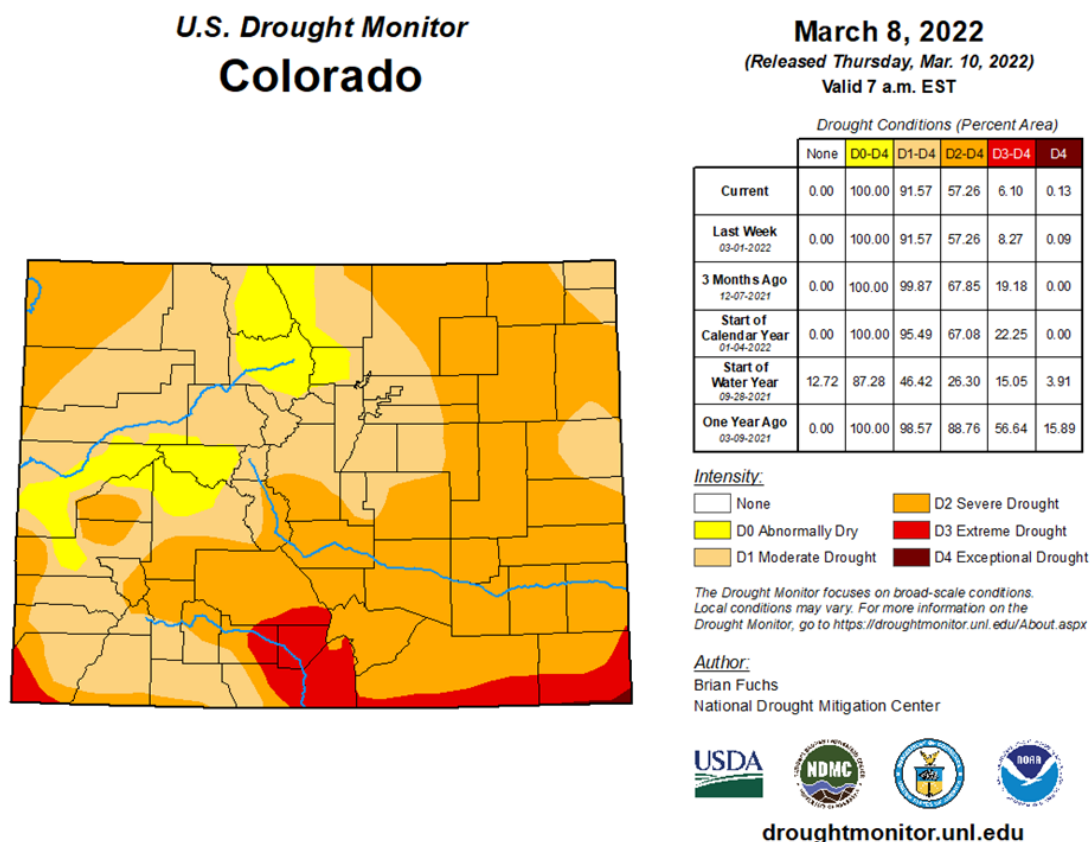
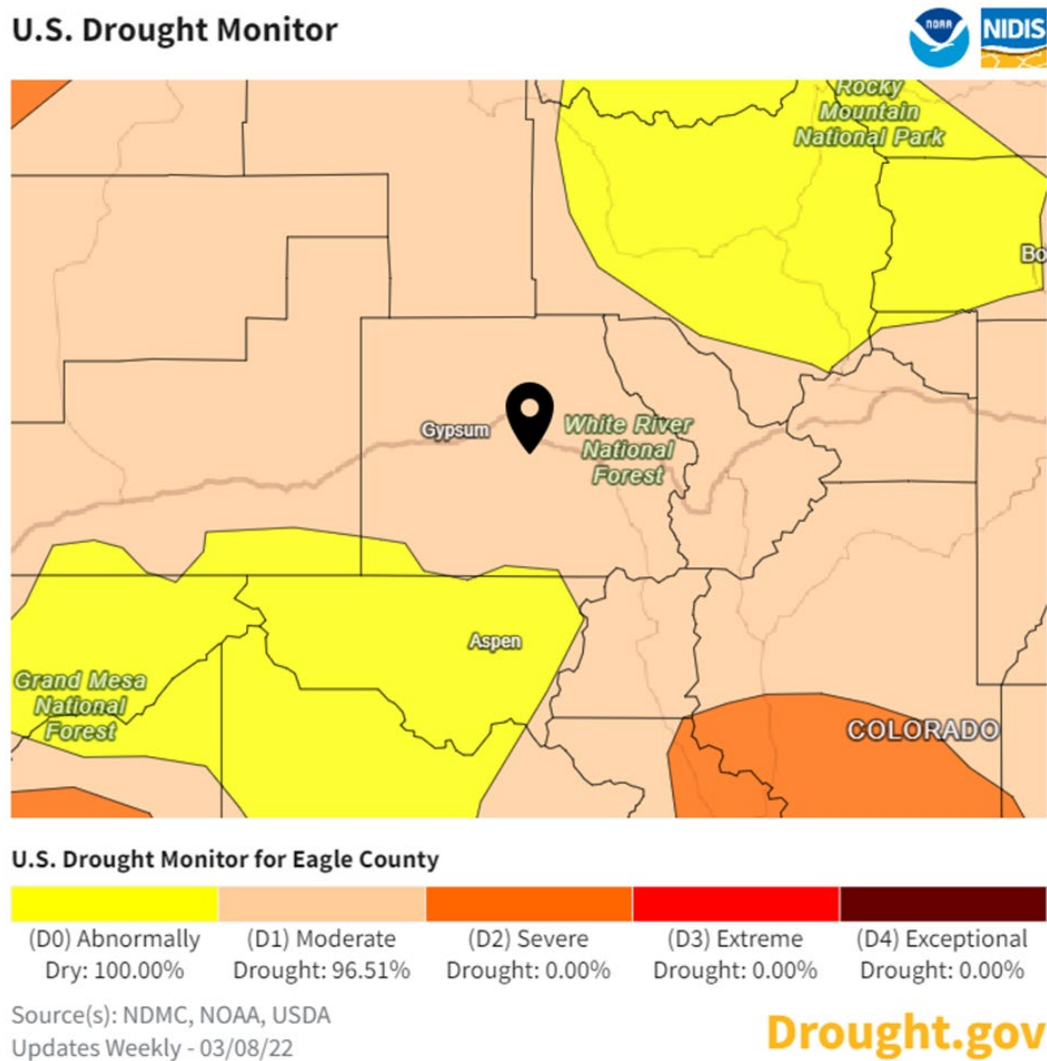


Figure 2. Eagle County Drought Monitor, Mar. 8, 2022 (NOAA, NIIDIS).





The seasonal drought outlook is not expected to change for Colorado through May 2022.

Figure 3. US Seasonal Drought Outlook through May 31, 2022 (NOAA).

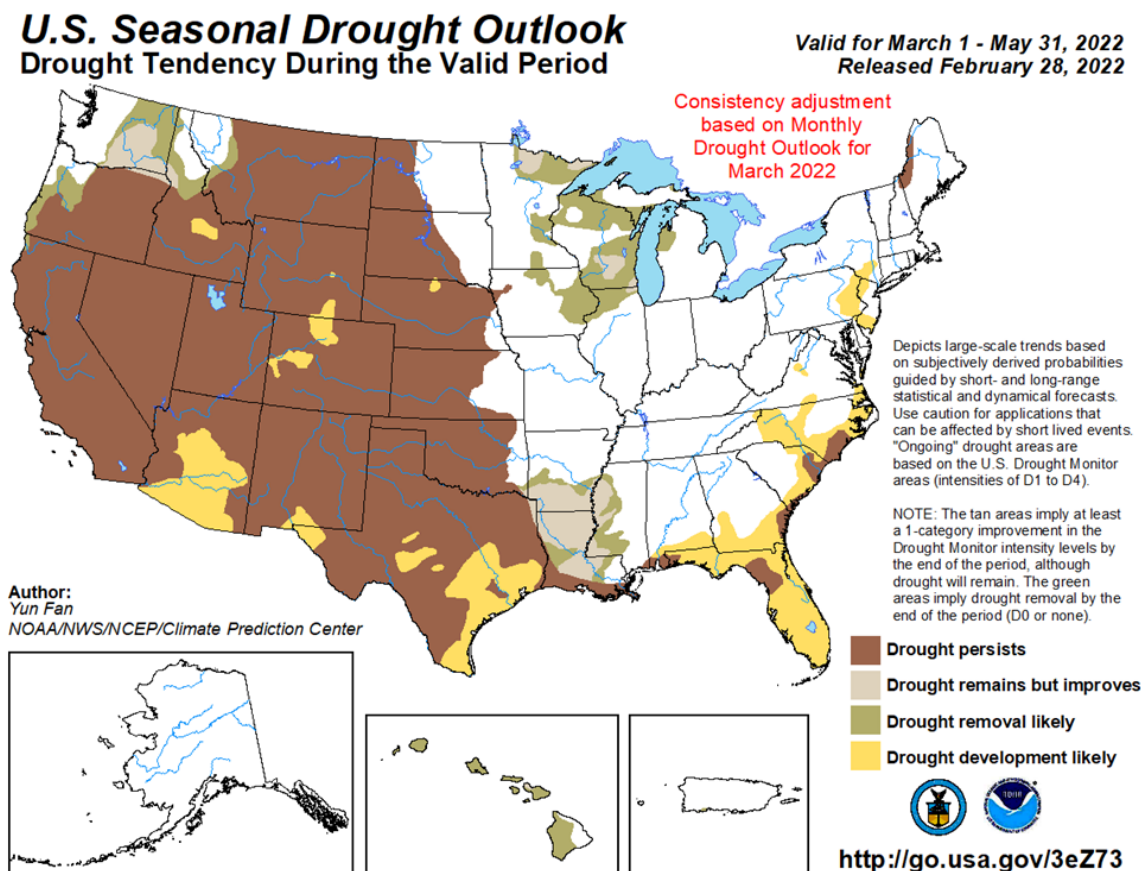


Figure 4. Snow Water Equivalent, Beaver Creek Village SNOTEL, Mar. 16, 2022 (USDA).

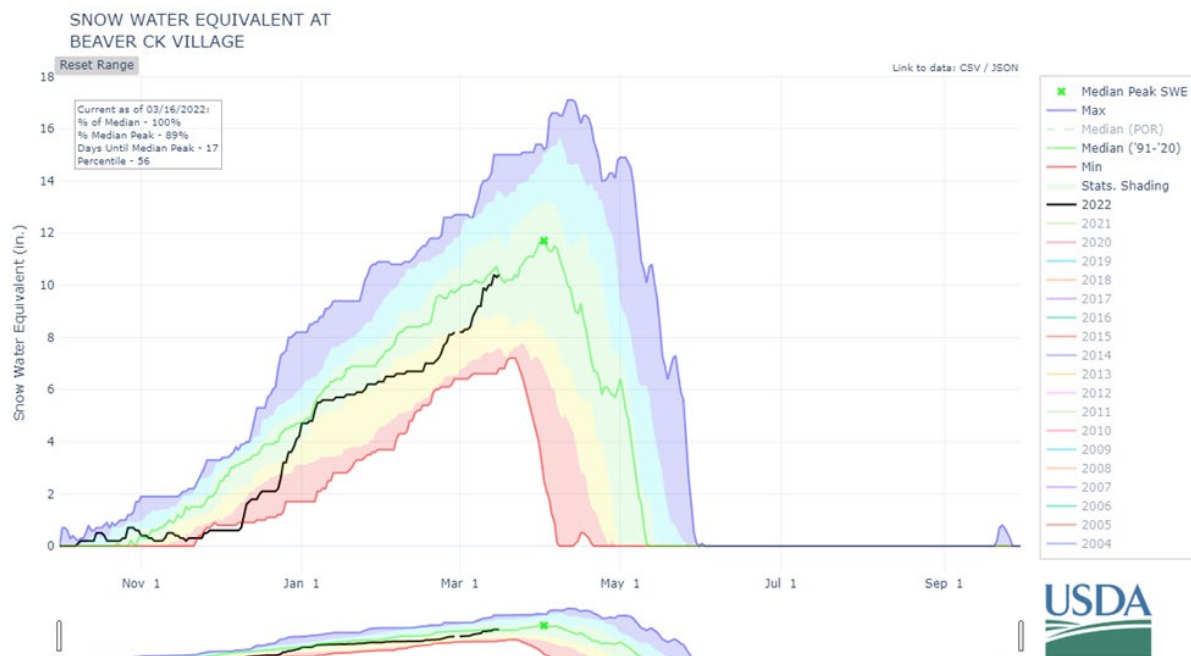


Figure 5. Snow Water Equivalent, McCoy Park SNOTEL, Mar. 16, 2022 (USDA).

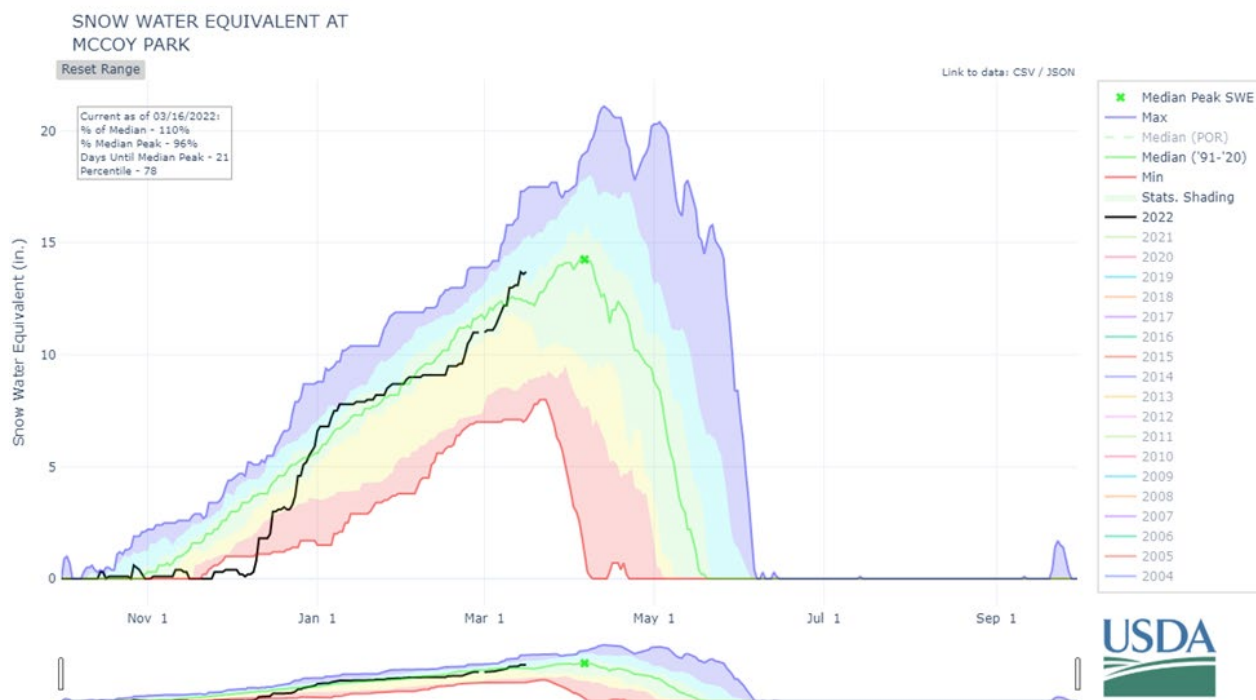


Figure 6. Snow Water Equivalent, Fremont Pass SNOTEL, Mar. 16, 2022 (USDA).

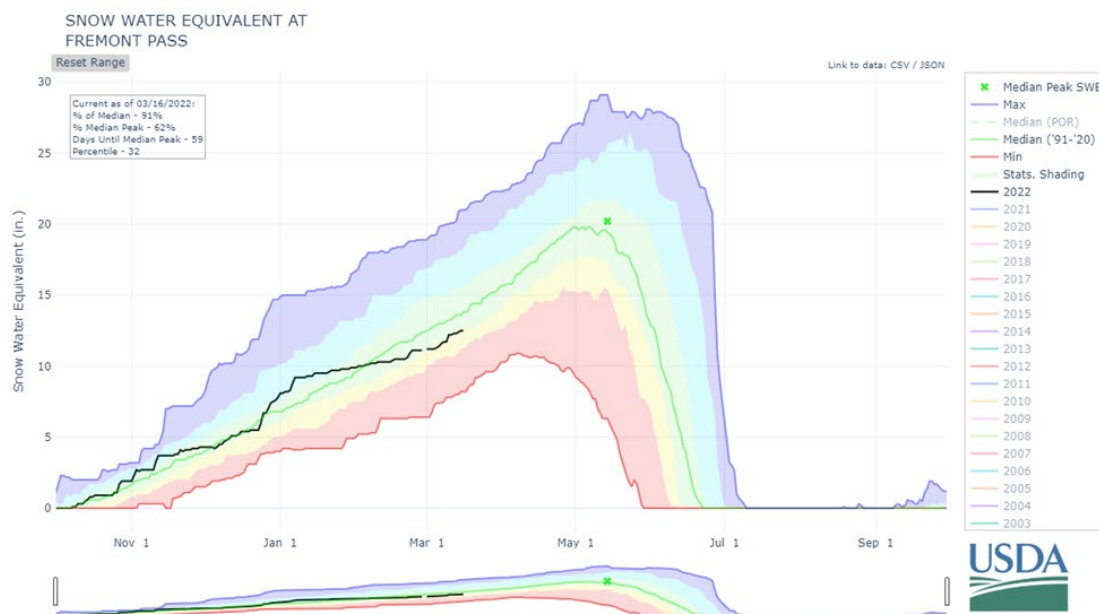


Figure 7. Snow Water Equivalent, Copper Mountain SNOTEL, Mar. 16, 2022 (USDA).

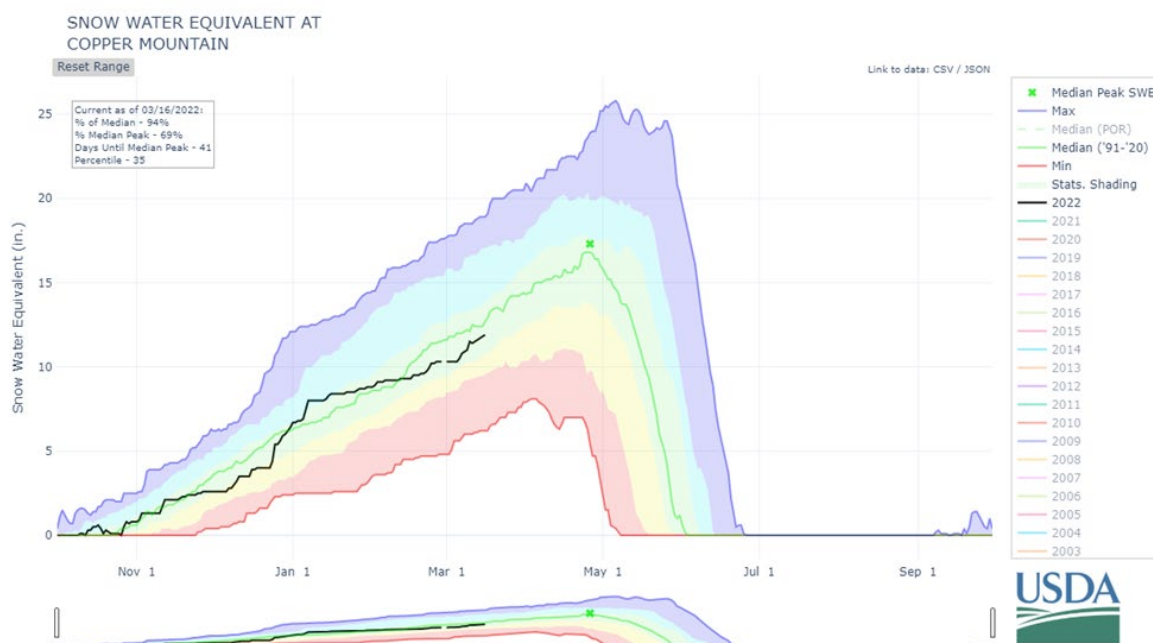
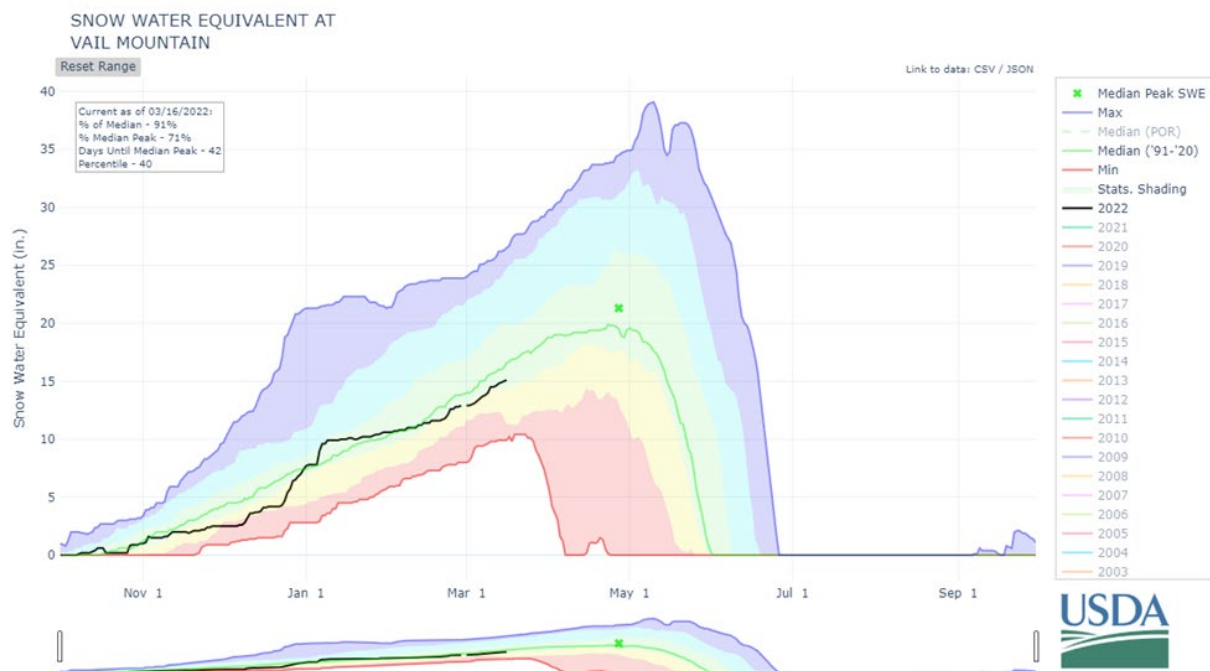




Figure 8. Snow Water Equivalent, Vail Mountain SNOTEL, Mar. 16, 2022 (USDA).



Streamflows remain low, even for the typically low-flow winter season. Largely due to recent past of higher than normal temperatures and low precipitation, baseflows across the region remain low. Stream hydrographs plotted from the USGS gages on Gore Creek above Red Sandstone Creek and the Eagle River at Avon are shown below in Figures 9 and 10.

Figure 9. Streamflow for Water Year-to-Date 2022, Gore Creek (CBRFC).

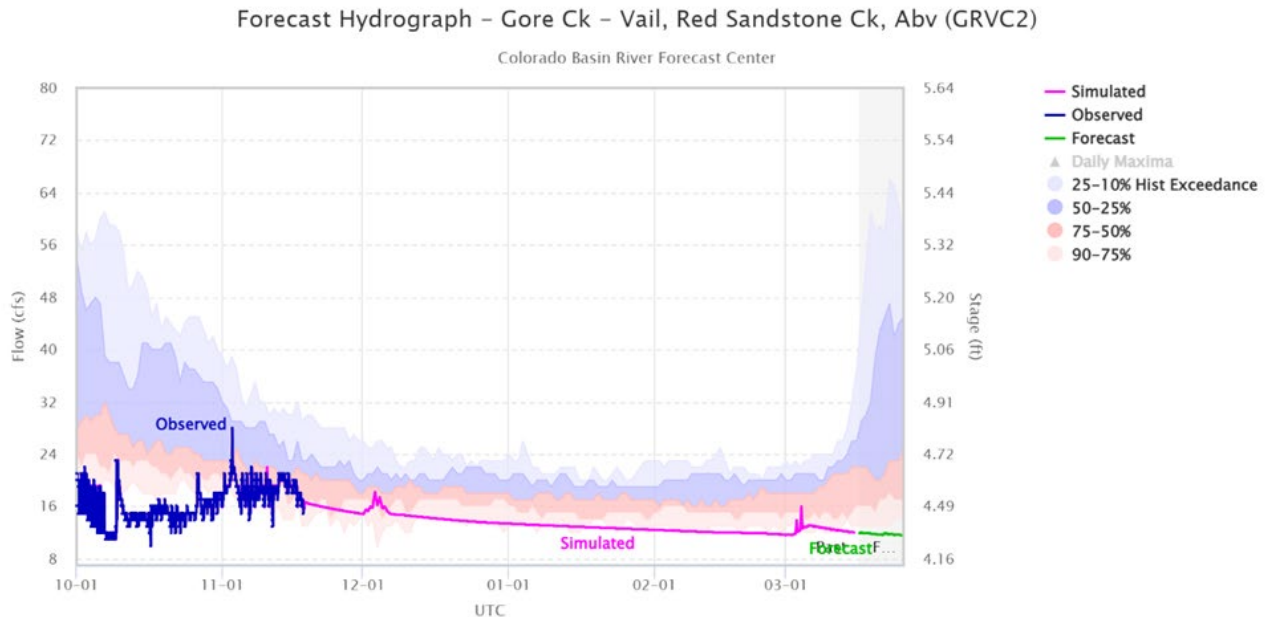


Figure 10. Streamflow for Water Year-to-Date 2022, Eagle River at Avon (CBRFC).

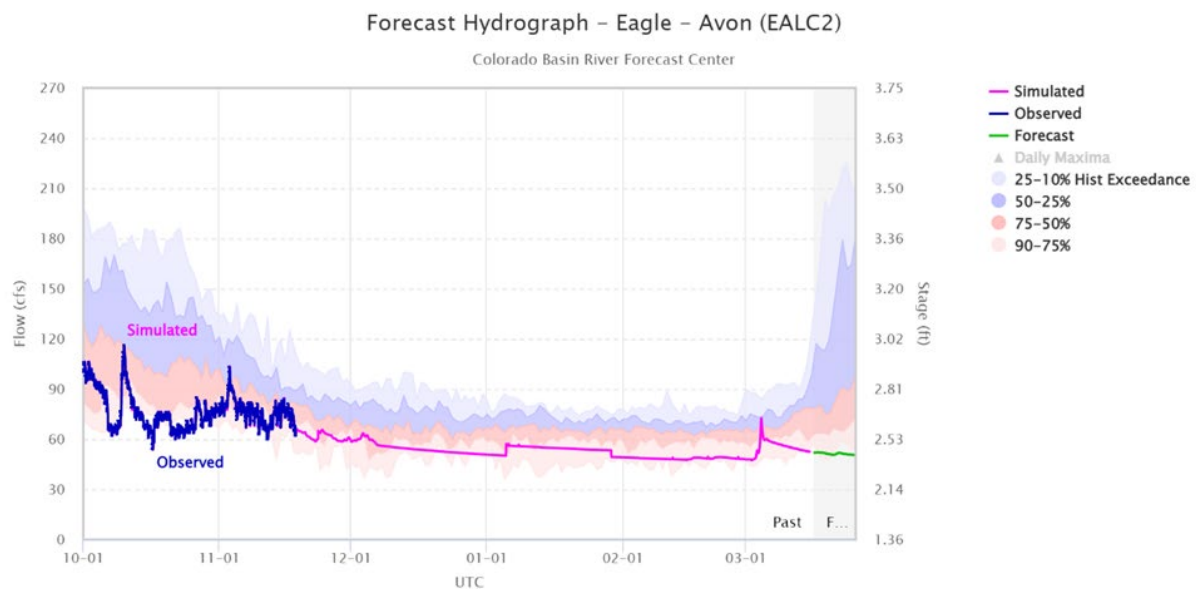
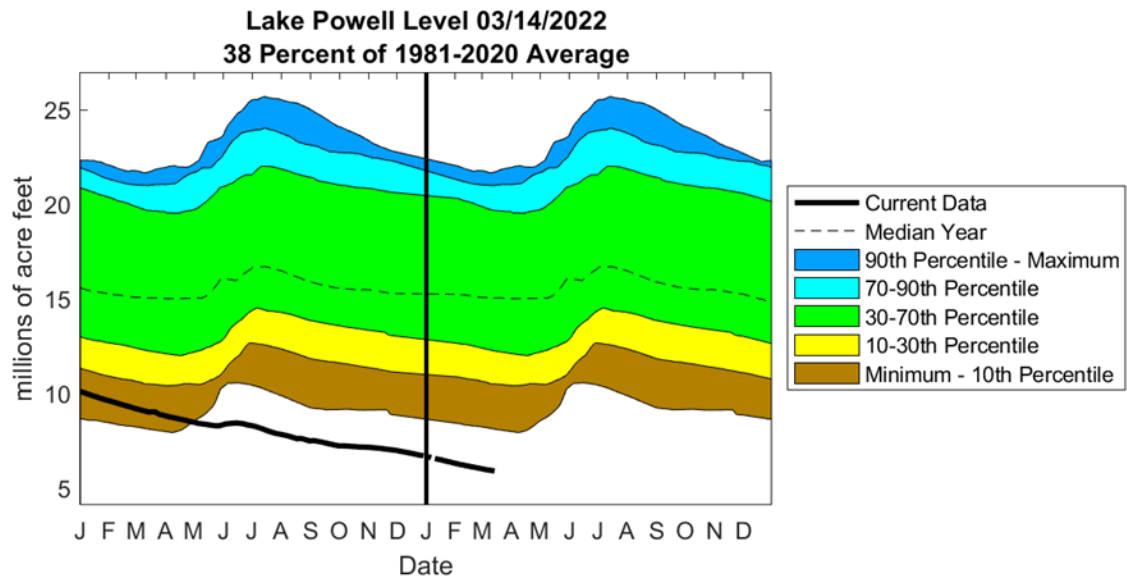


Figure 11. Lake Powell USBR Water Elevation (Mar. 2022).



Current long-range forecasts from the National Weather Service show that below average precipitation and above average temperatures are expected for the next three months. Current maps are shown in Figures 12 and 13.

Figure 12. Three-month precipitation outlook (NOAA 2022).

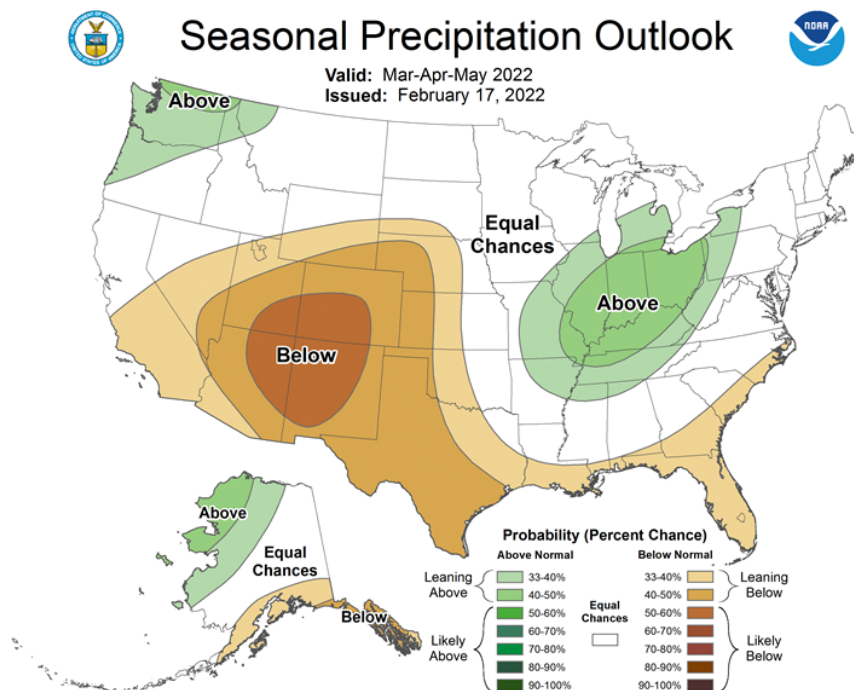
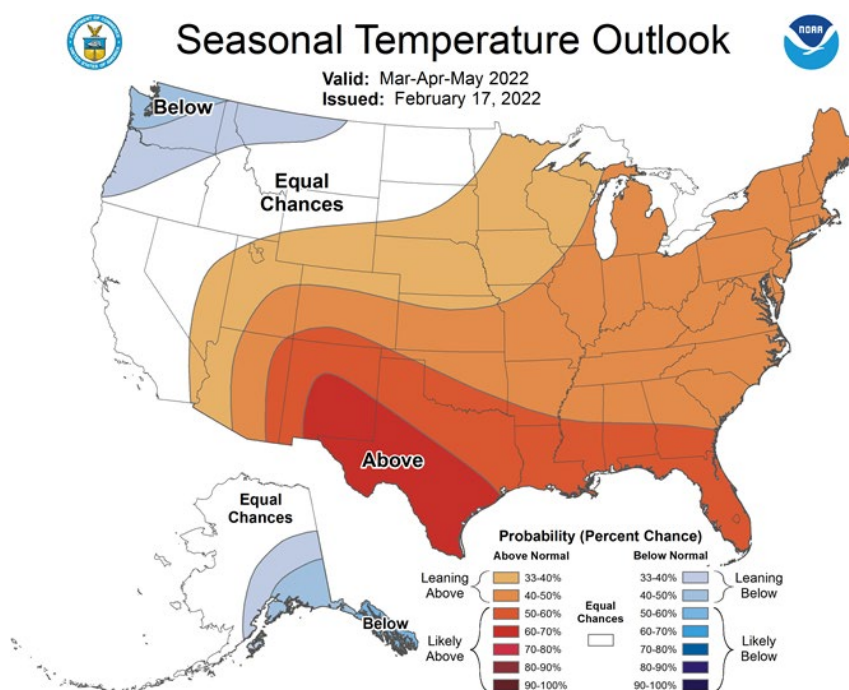


Figure 13. Three-month temperature outlook (NWS 2022).





## MEMORANDUM

**TO:** Board of Directors  
**FROM:** Melissa Marts, P.E.  
**DATE:** March 14, 2022  
**RE:** Avon WWTF Nutrient Upgrade Project Construction Update

This memorandum is to provide an update on the Avon Wastewater Treatment Facility (AWWTF) Nutrient Upgrades Project. A PowerPoint presentation showing project progress will be provided during the Board meeting.

### *Work Completed in 2020*

Moltz Construction, the general contractor, mobilized on May 4, 2020. Work began with site demolition, and installation of a construction fence with noise mitigation fabric along the west property line near LiftView condominiums. Concrete work for expansion of the aeration basins was completed and concrete placements started for the new secondary clarifier tank. The tower crane, erected on a micropile foundation, can be seen from Nottingham Lake.

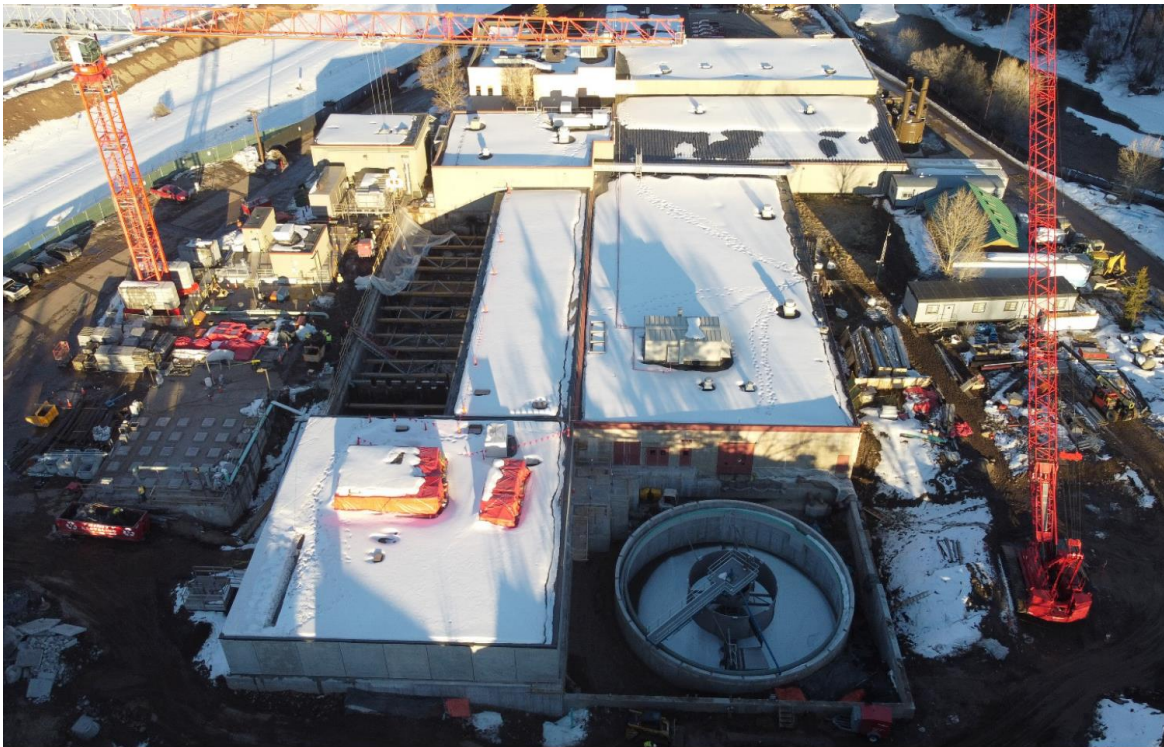


Figure 1: Construction site aerial image (winter 2022)



### *Work Completed in 2021*

Structural shotcrete was applied to the existing aeration basin 2 walls allowing for the walkways to be poured. The building over the new aeration basin volume was erected, with precast concrete wall and roof panels set during a single week. The process was repeated in November 2021 and the building over existing aeration basin 2 was set in less than a week. New screens, screw conveyor, and washer compactors were installed and commissioned in the headworks, and an increase in screenings capture quantity was immediately observed. Moltz crews also installed the new secondary clarifier mechanism and scum skimmer. Significant progress has been made with installation of the carbon scrubber odor control equipment. In order to perform the work in the primary treatment process, the entire flow through the facility was bypassed using a temporary pipeline and pumps for the duration of one month.

### *Work Completed in 2022*

The project team completed the largest commissioning event of the project, bringing half of the new aeration basin volume, blowers, diffusers, instrumentation, and associated piping online in early January 2022. This event essentially starts the new secondary wastewater process, improving process control, access, and treatment capability. Once the new internal mix liquor recycle (IMLR) system is installed in early 2022, the facility will be able to operate in either an A2O or 5-stage Bardenpho configurations which enable nutrient removal exceeding Regulation 85 nutrient limits. Since the startup of aeration basin 2, Moltz removed soils and tees from atop aeration basin 1 and are currently working on constructing zone baffle walls. Moltz has also made progress on the return activated sludge (RAS) pump station and finished the south primary clarifier modifications.



Figure 2: Aeration basins 2 commissioning



Figure 3. New RAS pumps and piping

Additional upcoming project work will include

- modifications of aeration basin 1 including shotcrete walls and rebar installation, construction of baffle walls, and equipment installation.
- forming, reinforcing, and pouring concrete for the secondary clarifier basin upper floor slab and erecting the secondary clarifier building
- commissioning of the carbon scrubber odor control equipment
- installation of IMLR and waste pumps and piping

An annual report as required by the 1041 Permit was submitted to, and accepted by, the Town of Avon. The only outstanding submittal to the Town of Avon is the proposed architectural fence design which will require a retaining wall that is currently in design.


District staff and the Engineer continue to be pleased with the quality of work from Moltz. The project is on schedule to meet the final completion date of January 9, 2023. Through the end of January 2022 \$31,560,491 has been billed of the \$49,627,732 contractor budget, about 64%. Currently, the project schedule is 72% complete and has used less than 25% of the owner's contingency. While the project budget is by far the largest the District has undertaken, the project risk is incredibly well managed and mitigated, largely due to the CMAR approach and the years of planning and partnership leading up to construction. ERWSD operations staff deserves special recognition for supporting the needs of the construction project while keeping the Avon WWTF operating efficiently and in compliance.





## MEMORANDUM

**TO:** District and Authority Boards of Directors

**FROM:** Jason Cowles, P.E. 

**DATE:** March 16, 2022

**RE:** Director of Engineering & Water Resources Report

### Authority Unallocated Water Update

We received a water demand worksheet and request for a conditional capacity to serve letter for a proposed Planned Unit Development (PUD) application for a parcel in west Edwards that is situated between the Eagle River Mobile Home Park and the District's Stillwater Housing (See **Figure 1**). The Margaux PUD will propose up to 32 rental units on a 1.7 acre parcel with 16 of the rental units deed restricted for local employees. The project proposes approximately 0.36 acres of landscaped area which will primarily utilize drip irrigation to trees and shrubs along with some temporary irrigation to re-establish native vegetation in disturbed areas. Given this information, we have calculated the irrigation demand based upon 50% of the standard water demand worksheet calculation. We estimate that the project will require approximately 3.47 acre-feet of augmentation water from the Authority's unallocated water supply.



**Figure 1 - Margaux PUD Location**

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

**Attachments**

Authority Surplus Augmentation Supply, Updated 2022-03-16

# Authority Surplus Augmentation Supply

Updated: 3/16/2022 by JEC

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

## Notes:

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

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

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

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

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

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

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