



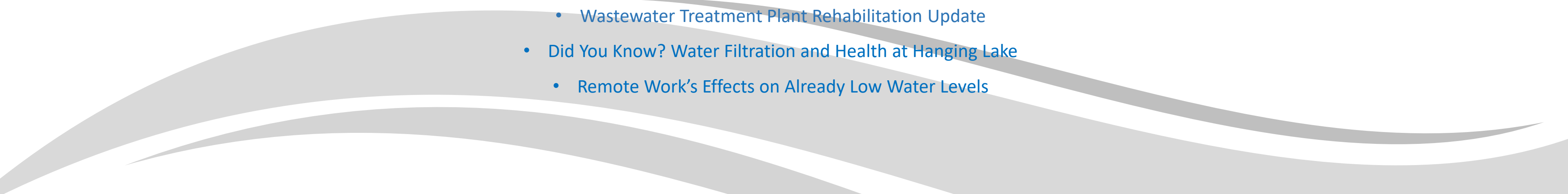
ELBERT CREEK  
WATER COMPANY

# WATER IN THE WORKS

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AN ELBERT CREEK WATER COMPANY QUARTERLY NEWSLETTER  
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# A Message from ECWC

Hello, and welcome to the sixth issue of *Water in the Works*, a quarterly newsletter published by Elbert Creek Water Company (ECWC). The purpose of this newsletter is to improve communication between ECWC customers and staff while providing customers with useful and informative articles, ideas, and updates about our distribution area.

# Full Speed Ahead... with Maintenance!

Summer is in full swing and ECWC is firing on all cylinders! With additional operators, ECWC has been very proactive with maintenance both at the treatment plants and out in the distribution/collections system. We've spent a lot of time taking an in-depth look at our membrane system. In 2018 the Water Treatment Plant upgraded from a media-based filter to a Microfiltration Membrane filter. To oversimplify, it's like a spaghetti strand with tiny holes that allows the water to pass through and captures any particulates. We can diagnose filter issues through weekly Membrane Integrity Tests (MITs) and visual inspections. If membrane maintenance is required, we pull the membrane train from the filter basin, then remove the cassette from the train. After we clean off the cassette, we apply air to the cassette to see exactly which strands are broken. We then take a long needle applicator and apply the repair material and let dry. We are essentially cauterizing the strands. When the repairs are done, we run another MIT to ensure test pressures are in a passing range.



Logan makes membrane repairs right before the start of ECWC's busy season.



## Full Speed Ahead... with Maintenance! (continued)

With the arrival of summer comes a concern we all have: fire safety. The 416 Fire was only a few years ago and it still lingers in a lot of our minds. Here at ECWC, we take fires just as seriously as you. We take a proactive approach with our Hydrant Inspection and Flushing Program. ECWC is also working closely with the Durango Fire Protection District on keeping their records in proper order and satisfying their ISO program. With this routine maintenance, hydrant deficiencies can be identified and addressed.

Another big project addressed this year was the settling pond liner at the Water Treatment Plant. The aging liner was beginning to leak resulting in waste. With the new liner, we aren't losing any water. The benefit is less waste and less cost to run pumps to keep the pond full.



Logan removing a fire hydrant bonnet to access the internal stem, which was removed and replaced.



Pond liner replacement project



## Full Speed Ahead... with Maintenance! (continued)



Now that irrigation season is here, we have been addressing irrigation service issues for the Landscaping Department. In this picture Alex and Logan work on an irrigation shutoff that had shifted so far off that the shutoff keys would no longer work. This is a common problem that occurs over time. I am extremely proud of these two. The energy they bring to the job, the willingness to learn and apply knowledge to the tasks they encounter is second to none!

This is just a few of the ways your water money is working for you. ECWC is constantly striving to become more proactive. What once seemed like an insurmountable task is now slowly becoming a sustainable entity. ECWC is excited to continue this trend and to continue to work with/for the community.

If you have any questions or comments, please don't hesitate to contact us! We love to hear from our customers! Please have a safe, healthy, and fun summer. We will see you out there!

-Sean Young, ECWC Manager



# ECWC Wastewater Treatment Plant Rehabilitation Update

The wastewater treatment plant rehabilitation project has started! A temporary treatment plant has been installed and is in the final stages of testing. Once the temporary plant is completed, demolition of old equipment and new construction will start. Some of the new equipment to be installed includes a headworks grinder, blowers for aeration, sludge and effluent pumps, as well as an 85,000-gallon clarifier. The clarifier will be installed in pieces through a partially removed wall. The upgraded facility will be equipped with SCADA controls and alarms to provide efficient and safe operations. Construction is expected to be completed January 2022. Expect frequent activity and traffic during this period. Please contact ECWC with any questions.





# Did You Know? Water Filtration and Health at Hanging Lake, Glenwood Springs, Colorado

By Anna Crona

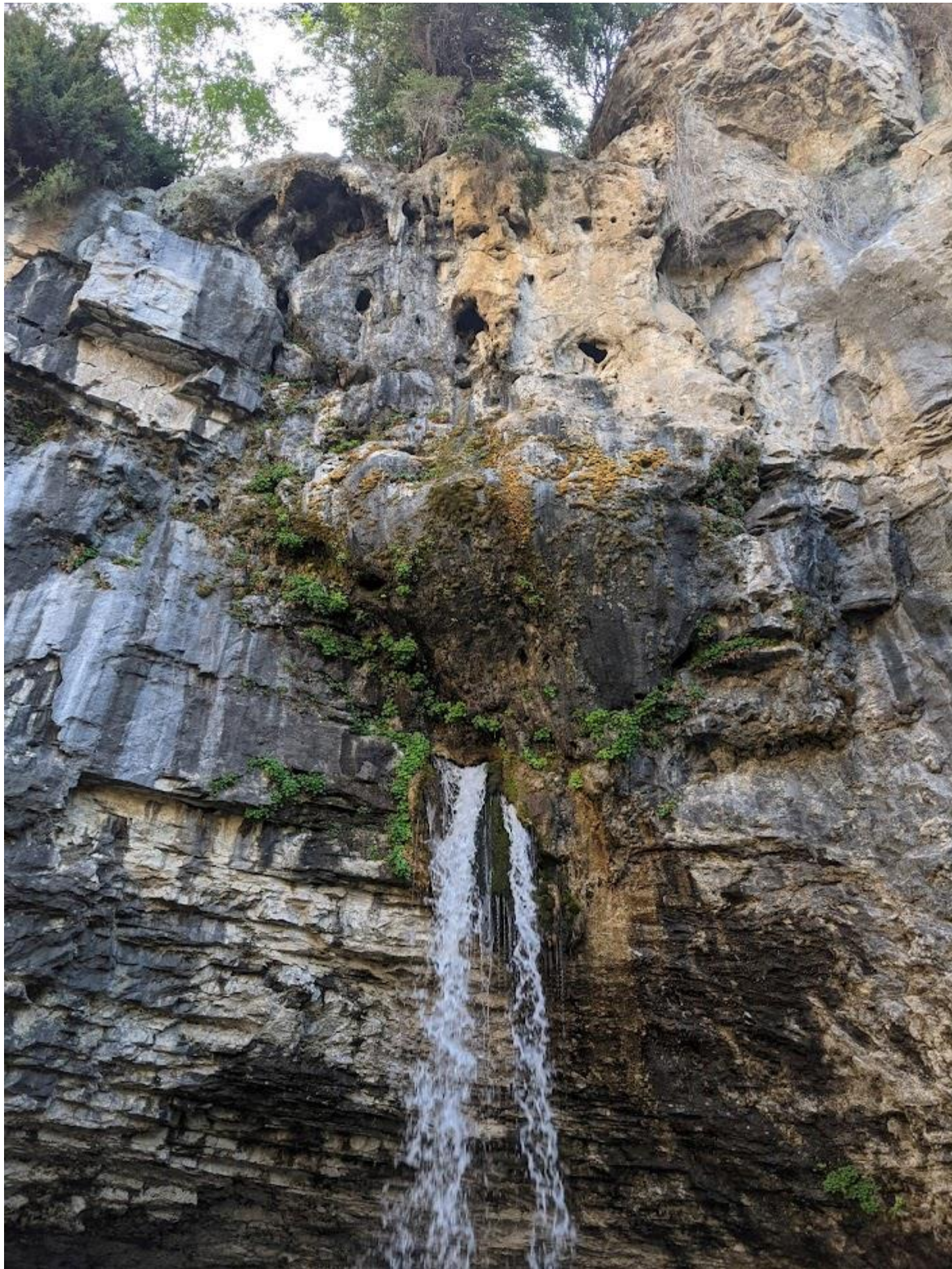
About a month ago I took a trip to Glenwood Springs, Colorado, where I was able to obtain a permit to hike the Hanging Lake Trail, located in the Glenwood Canyon. According to the US Forest Service, “Hanging Lake... was formed by a geologic fault which caused the lakebed to drop away from the valley floor above. Water flows into the lake over Bridal Veil Falls. The lake edge is built up from dissolved carbonates which are deposited on the shore as the water flows over.” (1) More specifically, Hanging Lake was formed through deposits of travertine, which is a type of limestone found near mineral springs. Hanging Lake is one of the largest and least-altered travertine systems in Colorado. (2)

Spouting Rock, situated at 7,323 feet in elevation, sits just above and feeds into Hanging Lake, which sits at 7,175 feet in elevation. Spouting Rock was created when ground water, trickling through cracks in the rock wall, combined with carbon dioxide from the air and soil to create carbonic acid. This process eroded the rock until holes formed and allowed more water to gush through. (3) This system of filtration is continued when the water reaches Hanging Lake, at which point it is purified when it moves through the rocks to form the lake.

The Hanging Lake ecosystem is home to a rare plant species called a Hanging Garden Sullivantia. Native to Colorado, it requires an environment rich in calcium carbonate and a constant supply of water. Interestingly, it must be surrounded by an arid environment at the same time in order to thrive. You can find Hanging Garden Sullivantia growing in areas where water seeps from rocks such as limestone, quartz, and shale. Currently, Hanging Garden Sullivantia is only found in five western Colorado counties: Garfield, Gunnison, Montrose, Pitkin, and Rio Blanco. This rare plant species is an indicator of water health. Its presence signifies that the water is clean, and it in turn helps purify water. (4)

If you are water/geology nerds like we are at ECWC, I highly recommend taking a trip to see Hanging Lake. The hike is currently permitted to protect the trail and the fragile lake ecosystem from the effects of tourism and the Grizzly Creek Fire burn scar. Permits can be obtained at the following link: <https://visitglenwood.com/hanginglake/>. Please do your best to educate yourselves on the unique and delicate nature of this area before visiting. It is our duty to protect these delicate natural environments so they keep filtering ground water, which protects other species, including us, in return.





Spouting Rock, with Hanging Garden Sullivantia



Hanging Lake

Works Cited

- (1) <https://www.fs.usda.gov/recrea/whiteriver/recrea/?recid=41225>
  - (2) <https://www.nps.gov/subjects/nlandmarks/site.htm?Site=HALA-CO>
  - (3) US Forest Service sign located at Spouting Rock
  - (4) US Forest Service sign located at Hanging Lake
- (Photos taken by Anna Crona)



# Why Remote Work Might Worsen Southwest Water Woes

By Keyonna Summers

As concerns flare over record-low water levels at Lake Mead, a new UNLV study shows that COVID-19 pandemic stay-at-home orders — and a subsequent societal shift to remote work — may be exacerbating the problem.

The study, recently published in the [Journal of Environmental Economics and Management](#), found that Las Vegas Valley residential water use soared during the pandemic, outpacing even combined pre-pandemic usage across Southern Nevada's three main property types (residential, commercial, and schools).

That may not seem surprising, considering the intense focus on precautionary public health measures such as sheltering in place and frequent hand washing during the pandemic. But given drought conditions brought on by the already-meager water levels within Lake Mead and its Colorado River tributary, a team of UNLV economists says the data has potentially dire implications.

As more companies and institutions opt for business and educational learning models that embrace the pandemic's reliance on virtual connections, researchers say the increase in hybrid or completely remote work and school environments might strengthen the strain on the region's water resources. They called on government leaders to implement better infrastructure or water conservation processes to accommodate the prospect of people spending even more time at home.

“While intuitive, these results are important as it highlights the potential effects of a permanent shift toward remote working, even post-COVID-19, that may potentially strain water resources in areas already facing scarcity,” the authors wrote. “Such a strain on water resources, especially in the Western United States, will likely pose additional challenges as people begin to relocate away from the coasts to the interior of the country.”

The study, jointly authored by UNLV Lee Business School economics professors Nicholas Irwin, Ian McDonough, and Shawn McCoy, is the first publication that convincingly estimates the impact of the COVID-19 pandemic on water usage across property types.

The team examined residential, commercial, and school customer bills from the Henderson Water District — the Las Vegas Valley's second-largest municipality and a microcosm of the larger multi-state region that draws water from the Colorado River — from 2017 through September 30, 2020. Residential users comprise 98% of Henderson's total user base.

Aggregated across all users, the Silver State's stay-at-home order led to an increase in net water usage between 32 to 59 million gallons over the first 30 days, findings show. Five months after the lockdown, these aggregate effects increased to approximately 491 million gallons of extra water consumed each month.

Nearly 90% of the Las Vegas Valley's water is drawn from Nevada's portion of Colorado River water rights, which entitles the state to 300,000 acre-feet (97.76 billion gallons) per year. This water allocation was assigned in 1922, when Nevada's population was just about 80,000 — less than 3% of its current population of 3.1 million residents.

Census estimates show that Idaho, Arizona, Nevada, and Utah are the top four Western states with the largest population increases from 2019 to 2020. Except for Idaho, all of them source water from the Colorado River — along with New Mexico, Wyoming, California, and Colorado.

The strain on water resources is multifold. For example, California Gov. Gavin Newsom recently asked all state residents — including those who operate industrial commercial and agricultural businesses — to voluntarily reduce their water usage by 15%, and the Southern Nevada Water Authority has been lobbying state lawmakers to enact water conservation measures such as the prohibition of water-intensive decorative turf within medians, along roads, and in business parks.

“Given the condition of Lake Mead and the observation that many are still continuing to work from home, we think there are significant and broader implications for policymakers on regional and national scales,” researchers said.

“Policymakers in states facing such shortages must be cognizant of the effects from more and more corporations allowing workers to permanently shift towards remote work and increases in population from residential mobility, all of which may require renewed efforts to encourage water conservation,” they said. “Without adjusting their water consumption habits or preferences in moving from water-rich to water-poor parts of the United States — i.e. installing low-flow and/or highly efficient home appliances or converting landscaping to drought-tolerant species — the added pressures of this increased population may serve as a tipping point into severe water restrictions if not mitigated.”



# Water and Wastewater Bill Late Fees

In keeping with Covid-19 regulations, ECWC has waived late fees on all overdue water and wastewater bills for the last several months. Late fees will now resume, starting on August 16<sup>th</sup>. To check your account balance or to pay your bill online, please log into your WebShare account at this link:

<https://share.dwcorp.com/WebShare/Login.aspx?ReturnUrl=%2fWebShare%2f%3fclientKey%3d421%26viewID%3d3&clientKey=421&viewID=3&cookieCheck=true>. You can also send check payments to us at 521 CR 200, Dgo, CO 81301, which is the site of the ECWC office and plants. Please call Anna with any questions or concerns at 970-382-6787. Thank you!

