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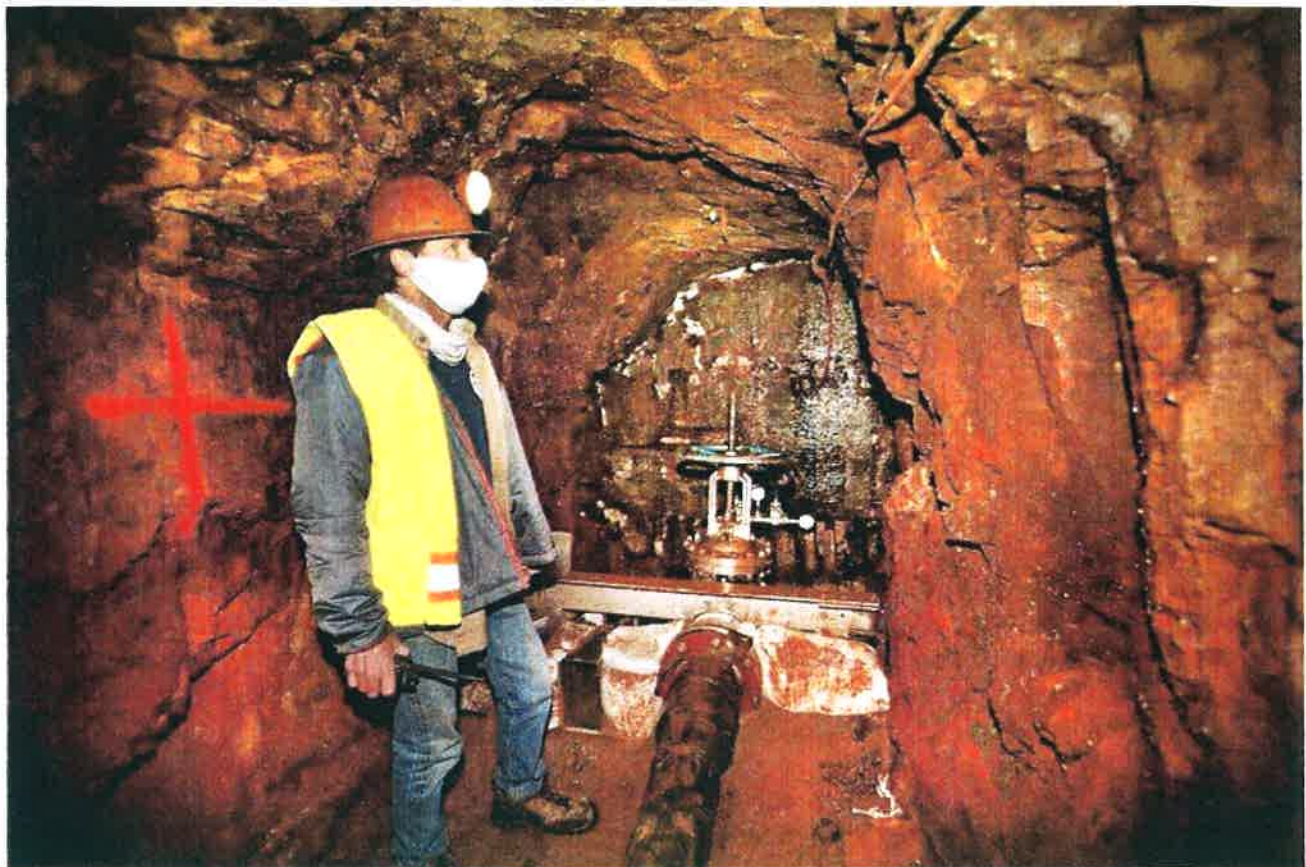
Bulkheads caused the Gold King Mine spill. Could they also be part of the solution?



Remediation tool can limit acidic drainage, but experts must also understand the complicated hydrology

By Aedan Hannon Herald Staff Writer

Wednesday, Mar 30, 2022 5:00



Kerry Guy, on-scene coordinator for the Environmental Protection Agency, stands at a bulkhead inside the Red and Bonita Mine north of Silverton on July 29, 2020. The bulkhead in the Red and Bonita Mine is the only one the EPA has installed in the Bonita Peak Mining District. There are more than a dozen bulkheads installed in the Superfund district. (Jerry McBride/Durango Herald file)



When the U.S. Environmental Protection Agency and its contractors excavated the Gold King Mine on Aug. 5, 2015, crews were attempting to assess water releases from the mine with the aim of guiding future mine remediation.

Instead, they struck rock and soil plugging the mine, releasing more than 3 million gallons of water laden with heavy metals such as lead, arsenic and cadmium into Cement Creek north of Silverton and eventually the Animas River.

Bulkheads remain relatively obscure except to those involved in mine remediation, but their purpose is to plug mines and limit the release of mine waste while reversing the chemical processes that contribute to acid mine drainage. They can be simple fixes for extraordinarily complex mining systems and produce unintended consequences. But they are also a critical tool for the EPA and those working to improve water quality and reduce the lingering effects of more than a century of mining in the Bonita Peak Mining District.

“They have great value and perform a really important function in mine remediation,” said Ty Churchwell, mining coordinator for Trout Unlimited, a fish conservation group. “In that sense, they are important and need to remain in the toolbox.”



Kerry Guy, Environmental Protection Agency on-scene coordinator, walks inside the Red and Bonita Mine on July 29, 2020, in the Bonita Peak Mining District, an EPA Superfund site. Mine remediation projects can use two types of bulkheads. A “pass-through” bulkhead has a valve that allows for the movement of water. Bulkheads without valves permanently impound wastewater. (Jerry McBride/Durango Herald file)



The role of bulkheads in the Gold King Mine Spill

In its October 2015 technical assessment of the incident, the U.S. Bureau of Reclamation argued that bulkheads were at least partially responsible for the Gold King Mine spill.

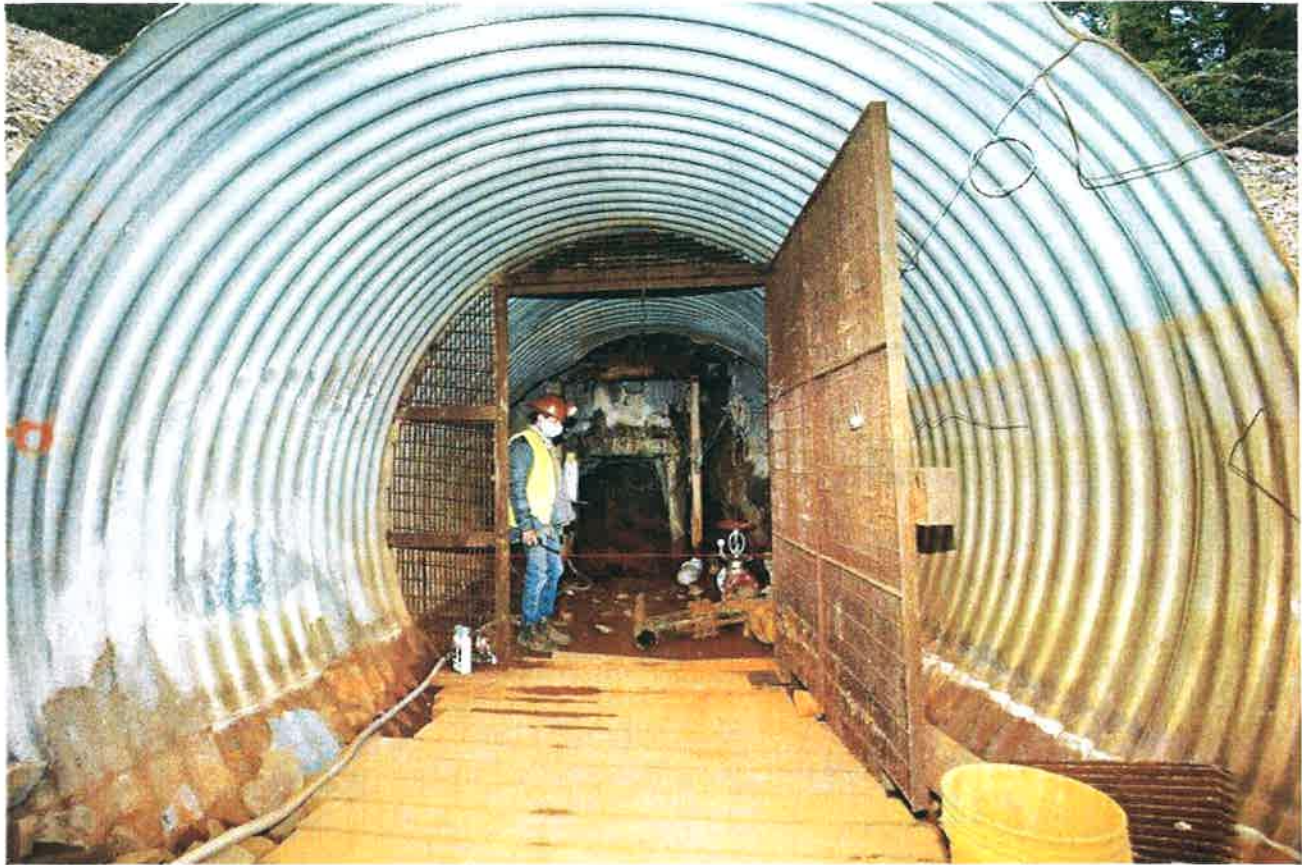
The Gold King Mine is a maze of tunnels, faults and fissures located at different elevations inside Bonita Peak and the surrounding mountains in Gladstone. The mine opening that drained when the EPA crews struck a plug holding back water was actually what’s known as the “Upper Gold King Mine,” or Gold King Mine Level 7.

A short distance away lies the “Gold King Mine,” which refers to a mine adit called American Tunnel.

American Tunnel served as a primary haulage point for the Sunnyside Mine, which was operated by the Sunnyside Gold Corp. for about a decade and a half until 1991, according to a 2015 report from the Colorado Division of Reclamation, Mining and Safety. It also drained water inside the mountain to allow for mining operations at lower elevations.

October 1996 and would go on to install two other bulkheads in American Tunnel.

With the installation of the bulkheads, the flow of toxic mine waste into Cement Creek decreased from 1,700 gallons per minute to about 100 gallons per minute.



Kerry Guy, on-scene coordinator for the Environmental Protection Agency, inside the Red and Bonita Mine in July 2020. The EPA and the U.S. Bureau of Reclamation have said bulkheads in the American Tunnel mine contributed to the Gold King Mine spill on Aug. 5, 2015. An assessment by the Bureau of Reclamation concluded that the bulkheads in American Tunnel filled Gold King Mine Level 7 with toxic wastewater that EPA's crews then released. (Jerry McBride/Durango Herald file)

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But as the impounded water rose behind the bulkheads, the water rose elsewhere, including in Gold King Mine Level 7, which sits about 750 feet above American Tunnel, according to the Bureau of Reclamation's assessment.

"We don't exactly know, but what we believe happened was that the water raised inside the mountain through the installment of those bulkheads, causing the water to pool up inside Gold King Mine Level 7, which was then released back in 2015," said Christina Progress, the EPA's remedial project manager for the Bonita Peak Mining District Superfund site.

According to the Bureau of Reclamation's assessment, which was peer reviewed by the U.S. Geological Survey and U.S. Army Corps of Engineers, the EPA assumed that Gold King Mine Level 7 was not full of water because of previous excavations and planned for 5 to 6 feet of water.

The EPA had previously used a drilling rig to bore into the Red and Bonita Mine in 2011 to check on water levels, but for whatever reasons chose not to do so for Gold King.

It turned out that EPA's assumption was wrong, and when crews excavated the entrance to Gold King Mine Level 7 they released a rush of toxic mine water.

of this buildup from the bulkheads in American Tunnel.

“By the time that system was installed, you can imagine it starts to raise the groundwater inside the mountain and that starts to fill up other workings,” Progress said. “We believe that there’s a hydraulic connectivity between the American Tunnel (and) Gold King Mine Level 7 and part of our evaluation of the Bonita Peak groundwater system is going to be understanding these hydraulic connectivities a little bit better.”



Kerry Guy, Environmental Protection Agency on-scene coordinator, speaks about the Red and Bonita Mine north of Silverton at its entrance on July 29, 2020. The Red and Bonita Mine is a short distance from American Tunnel and Gold King Mine Level 7, where EPA crews released more than 3 million gallons of water laden with heavy metals like lead, arsenic and cadmium. While the EPA and the U.S. Bureau of Reclamation have faulted bulkheads for filling Gold King Mine Level 7 with water, bulkheads are a key component of mine remediation. They impound toxic wastewater and limit the chemical reaction that creates acid mine drainage. (Jerry McBride/Durango Herald file)



The bulkhead

At its most basic, a bulkhead is a concrete wall that prevents water from escaping a mine opening.

They can be anywhere from 10 to 20 feet long and some possess a valve at the bottom, according to the Colorado Department of Natural Resources and Churchwell.

They are designed to stop acid mine drainage and control the flow of metal-laden water (through the valve) for treatment. They also prevent unplanned releases and can return groundwater levels to their previous levels. Those installed by Sunnyside Gold Corp. were designed for a 100-year life span, Progress said.

“If you have a concrete plug with no valve, your intention is to try to hold back all the groundwater in the mountain so that you don’t have to treat it,” she said. “If you have a flow-through bulkhead, the intention is to meter out the flow to minimize unplanned releases, but also to allow you to treat water downstream or maintain that water level within the mountain at a certain height.”

“The biggest issue that bulkheads solve is management of uncontrolled releases from mine workings.” Graves said in an email. “Discharge from mine portals can be controlled, and in many cases significantly reduced by installing bulkheads. Bulkheads can also improve water quality by re-establishing pre-mining flow paths and groundwater levels.”



Contractors for the Environmental Protection Agency work on July 29, 2020, to contain the flow of contaminated water into a single pipe that flows out of the Red and Bonita Mine north of Silverton. When mining rock containing sulfur comes in contact with water and air, it sours the chemical reaction that creates acid mine drainage, turning water orange. Bulkheads fill mines with water, limiting the air in tunnels and reducing acid mine drainage. (Jerry McBride/Durango Herald file)



In addition to impounding or directing the flow of water, remediation agencies and mining companies use bulkheads to counteract the chemical reaction that creates toxicity in mine drainage.

Gold, silver and other important metals are often extracted from rocks containing sulfides. When these rocks are exposed to both air and water, they leach their sulfides into the water through a process known as oxidative dissolution. This process can turn water orange in the case of the Animas River after the Gold King Mine spill.

Bulkheads back up water and fill mine tunnels. When they do so, they limit the air rocks can come into contact with, preventing the chemical reaction that creates acid mine drainage.

“The idea of a bulkhead is to try to flood the workings to change the chemical reaction that’s happening within a typical acid mine drainage scenario, where we’re cutting off the oxygen to the workings with the goal of reducing the acid mine drainage that’s generated,” said Rob Parker, a Superfund remedial project manager with the EPA for the Bonita Peak Mining District.

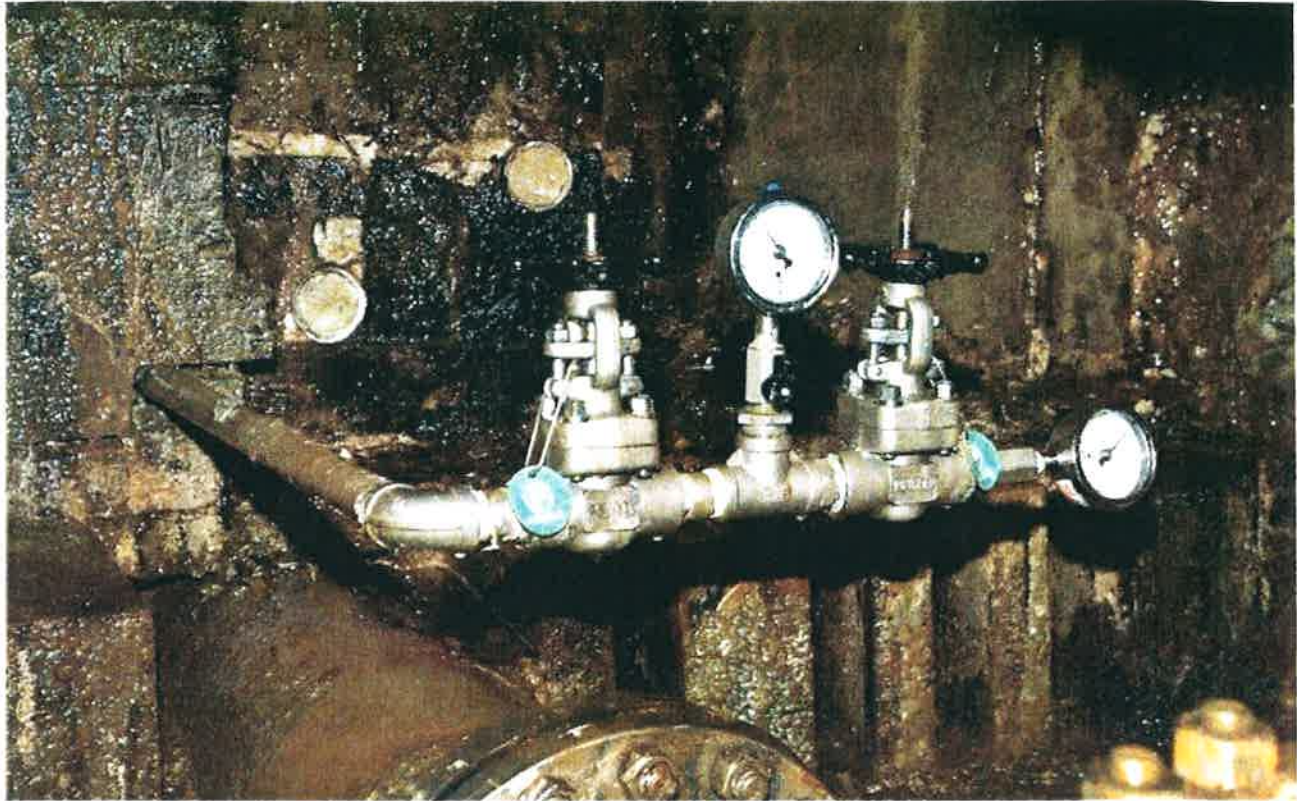
The chemical reaction can still occur, and water can escape the mountain through other faults and fissures, but the volume is limited so that the EPA and other operators can treat the water in other ways.

While bulkheads serve an important role in the remediation of hardrock mines, their use does carry risks.

Managers cannot see behind bulkheads, making it incredibly difficult to monitor what is going on inside the mine. Pressure transducers included in newer walls can give them some idea, but as is the case of the Red and Bonita Mine, drilling bore holes hundreds of feet into the mountainside is often the only way to get a definitive sense for water levels.

Acid mine drainage can also still make its way into river systems. Water naturally moves through rock and can turn into acid mine drainage when exposed to oxygen, though in smaller volumes.

seeing seeps that used to be clean that are now dirty because that water is now being oxygenated as it hits the seeps and springs?"



Some of the equipment that monitors the bulkhead inside of the Red and Bonita Mine in July 2020. Modern bulkheads have pressure transducers that allow remediation managers to get a sense for what is going on on the other side of the wall. Otherwise, they have no way to see in the mine and understand what is happening. Because of the unintended consequences bulkheads can have, the Environmental Protection Agency is carefully studying the hydrology of the Bonita Peak Mining District before it considers placing any additional bulkheads. (Jerry McBride/Durango Herald file)

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This movement of water is perhaps the greatest concern for remediation managers. Mines are complex networks of tunnels, but there also fissures and faults that a bulkhead can exploit to send pollution to other areas.

In the case of the Gold King Mine spill, the EPA had no idea that a bulkhead about 750 feet below Gold King Mine Level 7 was causing the adit to fill up in its entirety.

"We're not talking about just connectivity between actual mine workings where people have drilled holes and where they've actually connected," Parker said. "There's natural fractures and faults in (Bonita Peak Mining District) that have really high hydraulic conductivity where it's a little bit of a water superhighway between areas."

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A boost for water quality

The Bonita Peak Mining District has 48 mines, but almost half of all the toxic metals that end up in the Animas River and its tributaries come from just four mines located along Cement Creek, Churchwell said.

supported the agency.

“The CAG believes EPA’s initial main focus should be on the four big sources of metals in the Gladstone area – the mine drainages of the Gold King, Red & Bonita, American Tunnel, and Mogul,” wrote Peter Butler, chairman of the Bonita Peak CAG, in a letter to Progress and the EPA in 2019. “To address these sources, we support the presumptive remedy for Upper Cement Creek ... re-establishing the groundwater table by installing bulkheads at various portals.”

Churchwell said evidence from other mines in the district has strengthened the Bonita Peak CAG’s view that bulkheads should be used to address mine pollution in the area.

Koehler Tunnel sits over a ridge of mountains to the west of American Tunnel. In 2003, the Gold King Mines Corp., a mine operator in the area, installed a bulkhead in the tunnel.

Over the last about two decades, Churchwell and others have noticed a significant improvement in water quality to the point that trout, an indicator species for clean water, have returned to a stretch of Mineral Creek downstream from Koehler Tunnel where they have been absent for decades.



Workers inside the Gold King Mine Level 7 tunnel work to stabilize the rock July 27, 2016, at the mine north of Silverton. The Environmental Protection Agency has placed a “flow control structure,” which is like a temporary bulkhead that crews can get behind, in the tunnel. It will be several years before the agency decides if it should place any bulkheads in the mine. According to Ty Churchwell, mining coordinator for Trout Unlimited, a fish conservation group, bulkheads have improved water quality in the Bonita Peak Mining District, allowing trout to return to stretches of water for the first time in decades. (Jerry McBride/Durango Herald file)

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“The water quality improvements on Mineral Creek have been dramatic and it is largely because of that really successful bulkheading project,” Churchwell said.

The benefits of bulkheading are perhaps most vivid in the case of Mineral Creek and the Koehler Tunnel, but bulkheads throughout Bonita Peak Mining District have limited the release of toxic wastewater and allowed trout to return.

A lengthy process

The EPA and mine remediation groups have a few other techniques at their disposal besides bulkheads.

“Passive treatment” involves the creation of wetlands or other natural systems that can filter out metals without equipment. Passive treatment solutions can be left alone and do not require routine maintenance.

With “active treatment,” water is pumped from mines to a treatment plant where it can be filtered before returning to rivers. While active treatment is the most effective way to remove heavy metals and clean water, it is also the most costly.

Bulkheads serve as an in-between. Bulkheads can cost hundreds of thousands of dollars, but by metering the flow of water, they allow mine remediation managers to use limited active treatment or wetlands and passive treatments that require few, if any, long-term costs.

“Ideally, if you can limit the amount of water through bulkheading and have a much smaller volume of discharge to then potentially treat, then you hold down maintenance costs substantially,” Churchwell said.

Ultimately, any maintenance costs at a Superfund site like the Bonita Peak Mining District are paid by the American taxpayer, he said.



Kerry Guy, Environmental Protection Agency on-scene coordinator, stands in the Gold King Mine tunnel July 27, 2016. The Bonita Peak Mining District Community Advisory Group, which provides community input to the EPA, has expressed its support for the agency's consideration of additional bulkheads in the district. However, any decision to install additional bulkheads will likely take years. According to Ty Churchwell, mining coordinator for Trout Unlimited, a bulkhead could have prevented the Gold King Mine spill. “If there were a bulkhead in the Gold King Mine, guess what? It would not have blown out,” he said. (Jarry McBride/Durango Herald file)



The EPA has only installed one bulkhead in the Bonita Peak Mining District so far. Of the more than a dozen bulkheads in the district, many were installed by Sunnyside Gold Corp. in the 1990s and early 2000s.

Any decision to install additional bulkheads will likely take years.

Learning from the Gold King Mine spill, the EPA is studying the mines around Gladstone like American Tunnel to understand the hydrology of the mines, including how Gold King Mine Level 7 filled with water and how additional bulkheads would affect that hydrology.

“At this point, you know, we really have a lot of investigative work that we want to get through,” Progress said. “... It’s going to be several years before I think we can really make any affirmative decisions about what to do with any of these mines, especially the major draining mines that we have (in) Upper Cement Creek.”

Whether bulkheads can be a part of the solution for Bonita Peak Mining District and Gold King Mine Level 7 will depend on this year’s long investigation.

But if Churchwell and the Bonita Peak CAG have any say, bulkheads will remain in the EPA’s toolbox.

“If there were a bulkhead in the Gold King Mine, guess what? It would not have blown out,” he said.

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Colorado parks are full and getting fuller. How will the state decide who gets in, and who gets hurt?



Everyone agrees the state's open spaces are growing alarmingly crowded on popular days

By Michael Booth, The Colorado Sun

Monday, Mar 23, 2022 5:22 Updated Tuesday, Mar 29, 2022 12:59



Mountain bikers ride along the South Shore trail at Lake Pueblo State Park on March 5. (Mike Sweeney/Special to The Colorado Sun)



If anybody could work the system and get access to wildly popular open space this summer, you'd think Colorado Parks and Wildlife Commissioner Taishya Adams would have a good shot.

But there she is, just like everyone else, penciling early March on her planner as the day she can first swing sharp elbows online to get summer group backpacking reservations at Rocky Mountain National Park, not far from her home in Boulder.

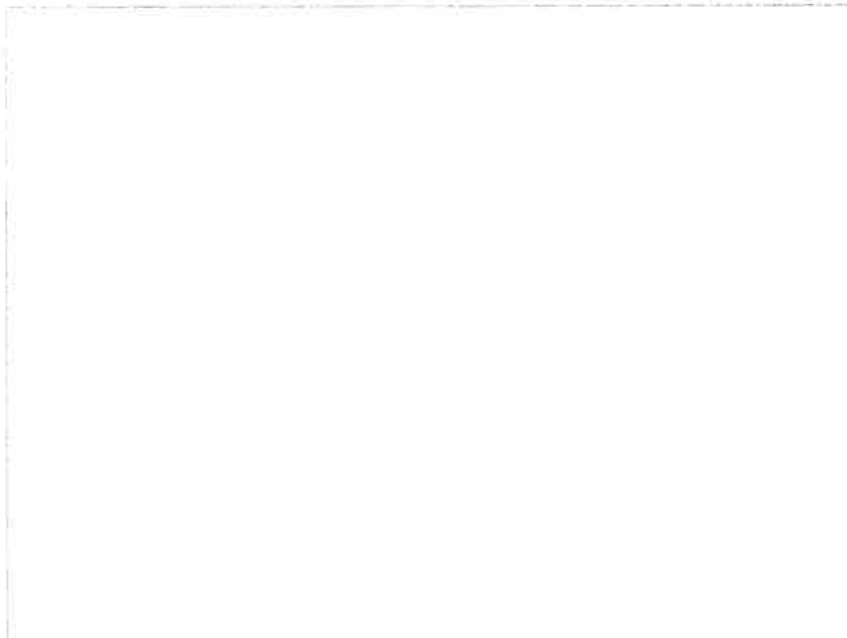
"I've had it marked in my calendar for six months," Adams told her fellow commissioners last week. She endorsed a new timed entry proposal for Eldorado Canyon State Park, where overflowing parking lots on weekends back up onto lawns in the little town of Eldorado Springs.

“I would hate to see that become a barrier,” Adams said.

Everyone agrees Colorado’s open spaces are growing alarmingly crowded on popular days. The numbers are startling.

Visitation at close-in Front Range state parks has doubled or nearly tripled. Sprawling Lake Pueblo had to turn away cars for the first time in 2020, the year it passed 3 million visitors. Jefferson County Open Space does not have gated entry for counting, but believes visitation to its 28 foothills gems passed 7 million last year.

Staunton State Park near Conifer rocketed from 89,000 in 2015 to 277,000 in 2020. Barr Lake in Brighton, a hit with birders and flatland bikers, went from 119,000 in 2015 to 258,000 in 2020, before settling back a bit with indoor pandemic restrictions easing in 2021. Open space officials expect use to keep climbing rapidly, if not quite as steeply as in the first year of the pandemic.



A Center for Western Priorities study of reservable camping spaces at federal and local public lands showed more than 95% of sites were taken at peak periods, with an overall 39% increase in summer camping at public spaces.

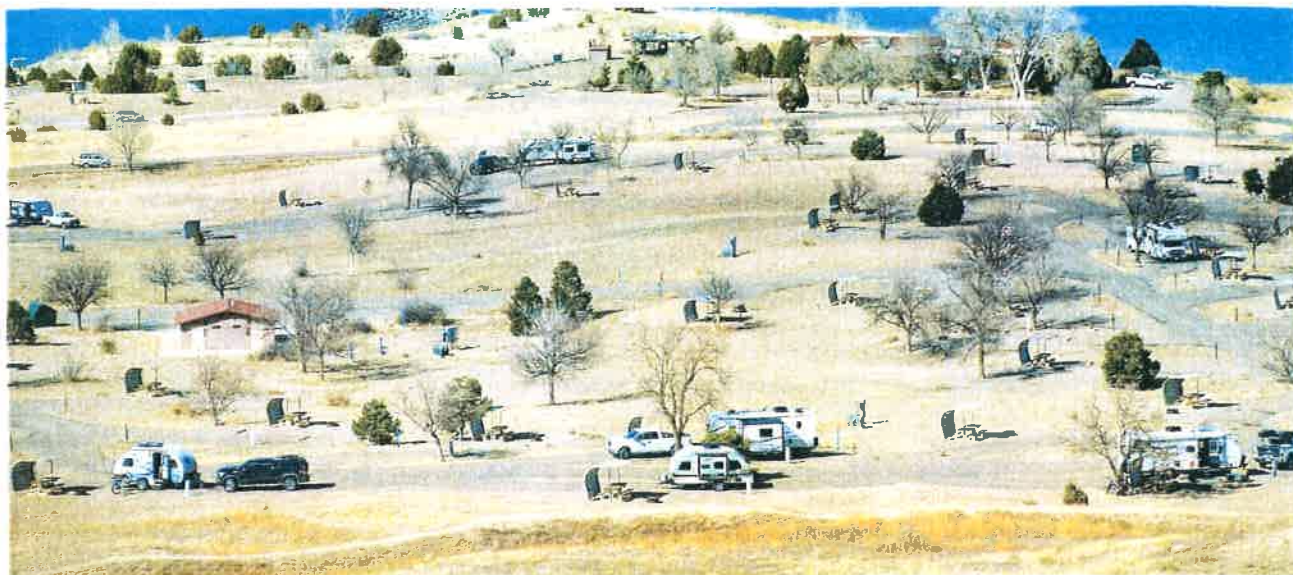
And the state parks commission may have just opened the gates on a new flood – the annual Keep Colorado Wild state parks pass will be only \$29 in 2023, tacked on to annual car registration with an option to decline it, less than half the current \$80 fee for one car.

Open space managers across the West are scrambling to accommodate the growth without provoking a public backlash against new rules. Mandatory shuttles from remote lots, parking fee add-ons, timed entry, seasonal trail closures for wildlife protection, and extra fees for nonresidents are all under consideration in every parks-related office.

“You do have to be ready to say OK, first come, first served doesn’t work if you have an entrance line that’s a half mile long every day,” said Aaron Weiss, deputy director of the nonprofit Center for Western Priorities, which advocates for expanded public lands and more parks funding. “We have to find a better solution.”

The answer can’t just be forcing everyone to online reservation systems or discouragingly high fees, Weiss and others say. The fix has to include more open land, they argue, including the Biden administration’s executive order seeking to protect 30% of U.S. land and water by 2030.

“Increased use of state and federal lands is a good thing, and the solution isn’t to curtail access, but rather increase it by conserving more land and removing barriers to entry from those who feel excluded or unable to access the outdoors,” said Jackie Ostfeld, director of Sierra Club’s Outdoors for All campaign.



The Arkansas Point campground at Lake Pueblo State Park on March 3. (Mike Sweeney/Special to The Colorado Sun)

Mike Sweeney/Special to The Colorado Sun



Hikers explore the bluffs along the Arkansas Point trail at Lake Pueblo State Park. (Mike Sweeney/Special to The Colorado Sun)



A mountain biker heads down the Water Tower trail at Lake Pueblo State Park. (Mike Sweeney/Special to The Colorado Sun)



“The threat of overuse poses in these small spots, and it is a legitimate threat, is minuscule compared to the threat posed by development,” Weiss said.

Anecdotal evidence and polling data show the online ticket jockeying and the turned-away cars, from Pueblo to Roxborough, are altering the way Coloradans use – or try to use – the great outdoors.

About 58% of Coloradans said crowding in the last two to three years has changed where and how they recreate, according to this year’s annual State of the Rockies Project poll of Western states by Colorado College and New Bridge Strategy. The average across all eight Western states polled was 48% changing their time and location of outdoor recreation.

Larimer County hiker Suzy Paquette said she understands the need for control experiments like timed entry, but added that the online regimen started at Rocky Mountain National Park last year did change how she and her husband get outdoors.

Even on weekdays in the summer, the national park passes are “gone like lickety split,” she said. “So that’s one of the problems, you can’t just say ‘Oh, let’s go to the park today.’”

his own “solace” in the crowded parking lots and packed trails, but worries more about the birds.

“These days, most of my walks on the trails where we live are at dusk or in the evening,” Bove said. He can choose to walk later, but he said, “wildlife is not so fortunate, as they have already moved away or been displaced from the ever increasing human traffic.”

Pueblo is proud that people come from all over to boat on Lake Pueblo, swim at Rock Canyon, or mountain bike on dozens of miles of trails, said Jamie Valdez, who has led mountain bike classes at the state park. Pueblo gets less snow, and the warm winter sunshine attracts recreation from multiple states, he said.

Valdez has his eye now on the city’s Pueblo Mountain Park, with its own hiking trails in the foothills southwest of town sitting as a hidden gem.

“It’s a beautiful, beautiful park, and it seems to be almost forgotten,” he said.

The nonprofit Boulder Climbing Community weighed in early on the proposed changes to how Eldorado Canyon is managed, knowing many of its members go dozens of times a year and count on driving, rolling or striding in just a few minutes after class or work.

To their credit, Boulder County and the state have consulted closely with climbers on improving the shuttle to the park and making sure timed car passes aren’t hoarded or sold, said Boulder Climbing Community Executive Director Kate Beezley. The shuttles have spaces for climbers’ crash pads and other gear.



Robert Fix of Westminster and Mike Wright of Boulder prepare to go climbing at Eldorado Canyon State Park in Eldorado Springs on March 4. (Olivia Sun/The Colorado Sun via Report for America)



Robert Fix of Westminster and Mike Wright of Boulder prepare to go climbing on March 4, 2022, at Eldorado Canyon State Park in Eldorado Springs. (Olivia Sun/The Colorado Sun via Report for America)



More controlled-entry rules for open space are inevitable, Beezley said, so parks managers need to make sure they consider all the user groups and keep things fair.

“Who is the primary user group? Who are your frequent flyers? And how can you help them maintain those patterns of their health and well-being?” she said.

Parks managers flinch when they think of the potential overuse coming to stunningly picturesque, newly minted state parks like Sweetwater Lake in Garfield County, and Fishers Peak near Trinidad. Weiss, with the Center for Western Priorities, uses the word “harden” to describe how open space planners must anticipate the places a frenzied public will park, hike, build fires or camp, and create protections for those natural areas.

Marketing experts also must join in to help spread people out by showcasing alternatives to the closest, most Instagrammed locations, experts say.

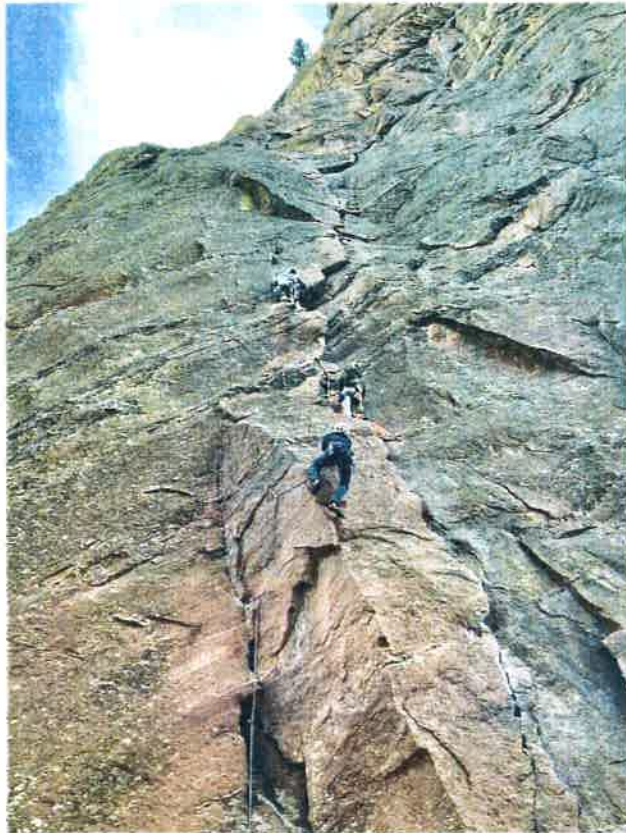
Otherwise, Weiss said, the great outdoors becomes “this massive Disneyland problem that you end up with at Zion National Park, or at Chautauqua for that matter. There’s a lot to be said for making sure folks are aware, hey, there are equally great if not better experiences, because it’s less crowded.”



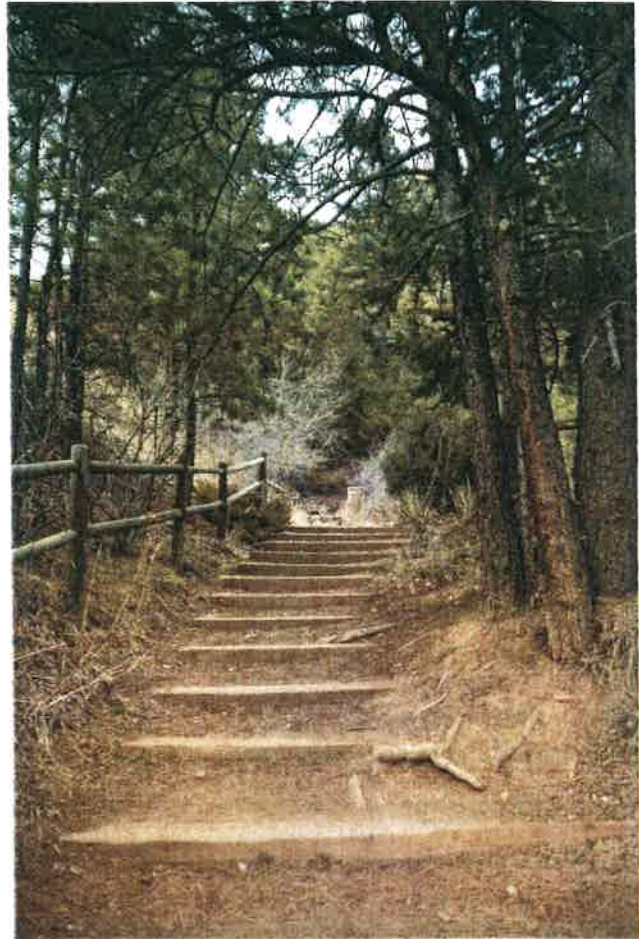
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BY THE PENNY HOARDER

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Rock climbers take on the popular Bastille formation near the entrance to Eldorado Canyon State Park. (Michael Booth/The Colorado Sun)



Trails at Eldorado Canyon State Park are heavily used. (Olivia Sun/The Colorado Sun via Report for America)



So what else can be done? Scott Roush, who oversees some of the busiest Colorado state parks close to the Denver metro area, said park users should expect more experiments with timed entry like the one moving forward for Eldorado Canyon this summer.

Highline Lake State Park is a place managers worry about, he said. Parking lots fill fast on weekends at the rare body of water in the high desert near Grand Junction. Without more parking controls, people leave their cars wherever they feel like it, just as at Eldorado Canyon, Roush said.

Jeffco Open Space is adding new parking spaces at Alderfer/Three Sisters Park outside Evergreen, community connections director Matt Robbins said. That may head off "volunteer" parking. Jefferson County also puts stock in educating park users on simple, highly effective tips like staying on the trail even in mud season. Hikers sidestepping mud create "braiding" that turns single track into 4-foot-wide throughways, Robbins said.

Charging for parking or timed ticketing are tougher, Robbins said, because Jeffco does not have controlled entry at its 28 parks in the way national or state parks do. The county did try an experiment last year partnering with Lyft for \$2.50 off rides to and from open space parks. It was a bust, Robbins said.

Quandary, beckons from the south.



The South Shore Marina at Lake Pueblo State Park. (Mike Sweeney/Special to The Colorado Sun)

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County officials worked with the U.S. Forest Service to implement a reservation system for county-owned lots at Quandary’s base, and a shuttle system for remote parking areas.

“In these high-usage areas, I think that’s going to be the future, whether it’s on state lands or federal lands,” Gibbs said.

Roush said some state parks planners are interested in trying technology aids like Lot Spot, a smartphone app that Jeffco uses to provide real time updates on park crowding and can recommend a nearby alternative. State parks are much more spread out, though, than county open space, and alternate choices may not be practical.

The public appears to be adapting to shuttle use as a way to control car overcrowding, and park planners have noticed. Eldorado’s shuttle system will run again in 2022. Shuttles to Rocky Mountain National Park’s Bear Lake are now an essential part of park operations. Buses now operate to control entry to Maroon Bells and Hanging Lake. Expect more.



Rock climbers are drawn to the spires at Eldorado Canyon State Park almost daily. (Olivia Sun/The Colorado Sun via Report for America)



From left: Odessa, Ben and Amanda Smith of Boulder pack up their climbing gear at Eldorado Canyon State Park. (Olivia Sun/The Colorado Sun via Report for America)

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Do we have an actual number-of-people problem, or do we have a number-of-cars problem? Because there are different solutions there, Weiss said. "And shuttles are of course part of that."

Another part could be other public transportation, added Weiss, who lives in Jefferson County. "Here, there are no RTD routes that get you to open spaces. That's a problem."

Open space managers at all levels of government are doing a better job consulting with each other and with private businesses expert in usage information and technology aids, said Tate Watkins, a research fellow at Montana's free market oriented Property and Environment Research Center.

Reservation systems at Arches and Rocky Mountain national parks are closely watched by state and county parks managers, Watkins said. Technology companies can offer ideas about counting parking space use, "frequent flyer" perks and integrating real-time crowding information on apps that can spread out park visitors.

Backcountry users of Great Smoky Mountains National Park – which saw 14.1 million visitors in 2021 – initially balked years ago at implementing a \$4 reservation fee for remote camping spots, Watkins noted. Now they think it's a bargain, and are relieved to know there's a spot open for them at the end of their day.

"There's just an infinite amount of creativity and opportunity for experiment," he said.

"We must be very careful to ensure that the actions of public land managers don't perpetuate the status quo, with many communities already feeling unwelcome or unsafe in some of our national and more remote parks and public lands," Ostfeld said.

Being mindful of everyone's time and resources is key to designing open space access, Weiss said.

"One thing we've learned from all of this is that any sort of time system where a clock turns over and everyone is mashing a button to try to get in, that is not fair and equitable," he said. Some space needs to be reserved for lottery or last-minute access for those whose lives can't revolve around one reservation window.

Colorado leaders say they are aware of all these pitfalls, and will keep working to avoid them. The new \$29 state parks pass linked to motor vehicle registration will bring in money to add new parks, experiment with reservations, expand shuttle systems and more, DNR's Gibbs said.

He said he still prefers to look at access as a good problem to have.

"In the long run," Gibbs said, "we want people to get outdoors. I mean, this is Colorado."

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Forest Service prepares to welcome e-bikes



Following national guidance, San Juan National Forest can allow the bikes for first time

By Aedan Hannon Herald Staff Writer

Sunday, Apr 3, 2022 10:00



Mike Phillips with Mountain Bike Specialists shows an electric-mountain bike sold at the store in Durango in November 2021. The U.S. Forest Service announced Thursday that the agency would allow for the use of e-bikes on forest trails, though each national forest has discretion over where e-bikes will be allowed. (Jerry McBride/Durango Herald file)

Jerry McBride



The U.S. Forest Service has finalized guidance that will allow national forests to consider expanding the use of e-bikes.

San Juan National Forest has been working on its e-bike policy for two years and with the new guidance will move forward with plans to authorize the use of e-bikes on forest lands for the first time. However, e-bikes remain prohibited on trails for the time being.

account wildlife, the use, all the factors that we typically take into account to make sure that it works for the rest of the public.”

The Forest Service updated two chapters of its code to reflect its guidance on e-bikes.

Forest managers must now consider how emerging technologies such as e-bikes are changing recreation and access when managing trails and Forest Service lands.

According to the new regulations, the agency defines e-bikes as motor vehicles, breaking them down into three classes.

“Class 1” e-bikes have a motor that works only when the rider is pedaling and the motor stops when the rider reaches 20 mph.

“Class 2” e-bikes have a motor that runs without pedaling, but the motor stops when the rider reaches 20 mph.

“Class 3” e-bikes have a motor that works only when the rider is pedaling, but the motor stops when the rider reaches 28 mph.

The Forest Service will designate trails and roads for e-bikes using these three classes.

The new policy also outlines criteria Forest Service staff members must review when opening trails to e-bikes.

Managers must minimize damage to soil and vegetation, significant disruption of wildlife habitats and conflicts between e-bikes and other recreational users. They should also consider a trail’s current use for biking and account for differences in speed with e-bikes.

E-bikes are not allowed on a National Science Trail unless they receive an exemption, according to the new rules.

The Forest Service currently allows e-bikes on all roads open to motor vehicles, but San Juan National Forest does not allow e-bikes on forest trails.

With the updated national guidance in place, San Juan National Forest plans to begin opening select areas of the forest to e-bikes.

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The process will take time as the Forest Service conducts environmental assessments required by the National Environmental Policy Act and develops a travel management plan.

“We just have to make sure that we do it correctly (so) we don’t impact trails, wildlife or degradation of the natural resources,” Owen said. “We’re working on updating (San Juan National Forest’s e-bike policy) as soon as we can and some of (the trails) will require more analysis just like other projects that we do on the forest.”

San Juan National Forest is weighing the use of e-bikes project by project. The agency is working on a proposal to expand mountain biking trails on Jackson Mountain near Pagosa Springs and e-bikes will be a part of that project, he said.

But the goal is to move to a broader policy in which e-bikes are allowed on certain trails across the forest.

“We want to do it forest-wide so we’re not doing it each individual piecemeal project,” Owen said.

As San Juan National Forest expands access for e-bikes, the agency will update its motor vehicle use map to reflect the areas that e-bikes can go and the trails they can use.

San Juan National Forest has yet to say when e-bikes will be allowed, but Owens said the Forest Service is working to finalize a timeline for their use. Until the agency develops a plan for e-bikes, they will remain prohibited.

While the forest is still steps away from allowing e-bikes, Owens said San Juan National Forest looked forward to expanding recreational access.

“We’re excited to welcome our e-bike users out to the national forest,” he said.

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REGISTRATION NOW OPEN! CCI Summer Conference

1 message

Annie Olson <aolson@ccionline.org>
To: Annie Olson <aolson@ccionline.org>
Cc: Kristin Dunn <kdunn@ccionline.org>

Tue, Mar 29, 2022 at 9:21 AM

Good morning!

Registration is now open for the CCI Foundation Summer Conference to be held May 31-June 2 in Eagle County. To register, view hotel reservation information and learn more, [please click here](#).



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Please reach out to me with any questions.

The CCI staff looks forward to seeing you in Eagle County!

Annie

Annie Olson

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