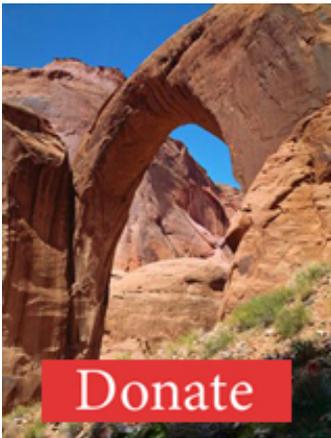


# Colorado River Lowdown

Newsletter of Glen Canyon Institute  
Volume 20, No. 7

July 20, 2021

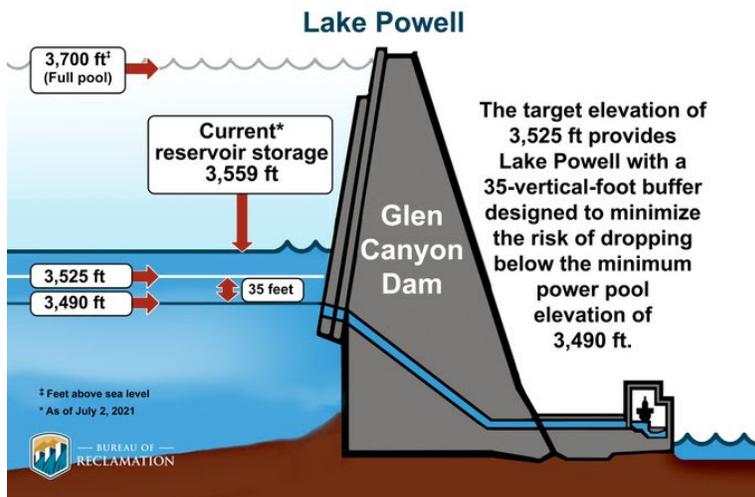


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## Reservoir Level Updates

As of July 14, 2021,  
Lake Powell and Lake  
Mead are at **33%** and



## BOR Begins Draining Upstream Reservoirs to Prop up Lake Powell

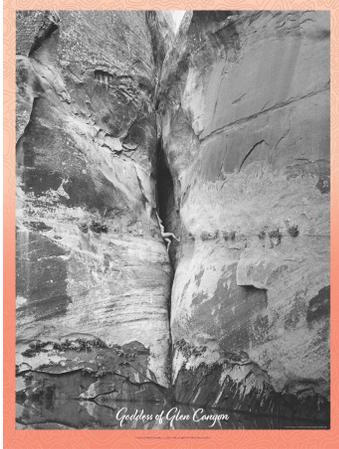
This week the [Bureau of Reclamation \(BOR\)](#) [began releasing extra water](#) from Flaming Gorge, Navajo, and Blue Mesa reservoirs to prevent Powell from dropping near minimum power pool. The agency expects this first wave of "emergency

35% of capacity, respectively.

[Lake Powell Water Database](#)

[Lake Mead Water Database](#)

[Upper Colorado Snow pack](#)



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releases" to prop up Powell by about 3 feet. The draining of upstream reservoirs to save Powell is part of the Upper Basin's Drought Contingency Plans, outlined in 2019. The bureau, however, did not expect to be implementing those plans so soon.

These drastic actions may prop up Powell for a little while, but as climate scientist [Brad Udall recently stated](#), "There is only about 5 million acre feet for that altogether. It is a one-shot deal." In the next year [BOR forecasts](#) a 79% chance that Lake Powell falls to elevation 3525 feet. They also predict that there is a 5% chance that it will fall below the critical power production level of 3,490 feet in 2023 and a 17% chance in 2024.

For years, GCI has argued that BOR and basin states should seriously assess the full drawdown of Lake Powell. Now that [the park service is advising houseboats be removed from the reservoir](#) and there's a possibility of losing hydropower production in the next two years, our message is more important than ever.

ENERGY



## < Hoover And Glenn Canyon Dams Are Low On Water, Threatening Power Production

July 13, 2021 · 4:29 PM ET



3-Minute Listen

+ PLAYLIST

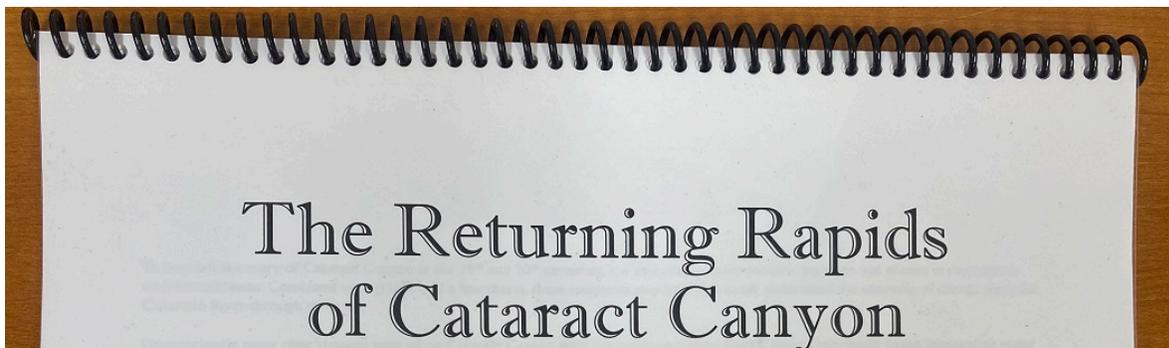


### GCI on Hydropower on NPR's All Things Considered

As the water behind Glen Canyon Dam dwindles and the prospect of losing hydropower becomes more pronounced, there has been greater focus on what will happen as production winds down. GCI had a chance to contribute to the conversation on [NPR's All Thing Considered](#) last week.

GCI has been looking at this issue for years, and in 2016 [commissioned a study](#) finding the loss of hydropower at the dam would result in an average increase of a \$.08 cents per month for most residential electric customers who get a portion of their power from the dam. The study dispelled the myth that Glen Canyon Dam is essential to the electrical grid, and highlights the reality that it's time to start planning for life after Glen Canyon hydropower.

[Click here to listen to the NPR piece.](#)





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As part of our partnership with the [Returning Rapids Project](#), we now offer their 2021 Field Binder for sale on our bookstore. This guide is years of work compiled into an easy to read and understand binder. It shows us how Cataract and Upper Glen Canyons have been changing since reservoir levels have been dropping. If you are interested in this region and want to understand what the restoring channel looks like, pick up one of these binders up for your next river trip!

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# BuRec Releasing Water From Upstream Reservoirs To Help Lake Powell



Shrinking levels of Lake Powell on Friday prompted the U.S. Bureau of Reclamation to announce a series of releases from reservoirs that feed the lake/Kurt Repanshek file

An ongoing series of releases from three reservoirs that feed water into Lake Powell at [Glen Canyon National Recreation Area](#) are planned by the U.S. Bureau of Reclamation, the agency said Friday.

The staged releases from Flaming Gorge in Wyoming, Blue Mesa in [Curecanti National Recreation Area](#) in Colorado, and Navajo in New Mexico are needed because in-flows to Lake Powell were down 2.5 million acre-feet between January and July, a BuRec release said.

Flaming Gorge's releases flow into the Green River and then the Colorado River, those from Blue Mesa feed the Gunnison River, which runs into the Colorado River, while the Navajo Reservoir feeds the San Juan River that runs into Lake Powell.

"The current forecast for (water year) 2021 is 3.23 (million acre feet)," or 30 percent of average, the release added.

Also on Friday, the National Park Service at Glen Canyon announced that work was beginning to [extend boat ramps](#) at the Wahweap and Bullfrog marinas on Lake Powell due to declining lake levels.

Five-year projections released by BuRec last week predicted a 79 percent chance that Lake Powell would fall below the Drought Response Operations Agreement target elevation of 3,525 feet within the next year. That target elevation provides a 35 vertical-foot buffer designed to minimize the risk of dropping below the minimum power pool elevation of 3,490 feet, and balances the need to protect the infrastructure at Glen Canyon Dam and meet current

operational obligations to the Lower Basin States of Arizona, California and Nevada.

On Thursday the lake's elevation was at 3,556.97 feet.

	Jul	Aug	Sep	Oct	Nov	Dec	
	(kaf)	(kaf)	(kaf)	(kaf)	(kaf)	(kaf)	Sum
Flaming Gorge Reservoir	13	42	43	27	0	0	125
Blue Mesa Reservoir	0	14	18	4	0	0	36
Navajo Reservoir	0	0	0	0	10	10	20
Sum:	13	56	61	31	10	10	181 kaf

The U.S. Bureau of Reclamation on Friday announced a scheduled series of releases from reservoirs upstream of Lake Powell/BuRec

The scheduled upstream reservoir releases were expected to bring an additional 181,000 acre-feet of water into Lake Powell by year-end.

"The additional delivery of 181 (acre feet) is expected to raise Lake Powell's elevation by approximately three feet," BuRec said. "The additional releases from the upstream initial units do not change the annual volume of water released from Lake Powell to Lake Mead in (water year) 2021, as those volumes are determined by the 2007 Interim Guidelines."

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Environment

Western Water Coverage

Throughout the history of the American West, water issues have shown their ability to both unite and divide communities. As an imbalance between water supplies and demands grows in the region, KUNC is committed to covering the stories that emerge. Reporter Luke Runyon heads up our water beat, covering the Colorado River, snowpack and areas dependent on scarce water resources. We also partner with news organizations throughout the southwest to fully cover water issues in the sprawling Colorado River basin.



# Colorado River Basin Reservoirs Begin Emergency Releases To Prop Up A Troubled Lake Powell

KUNC | By Luke Runyon

Published July 15, 2021 at 3:37 PM MDT



Luke Runyon / KUNC

Anchored houseboats hang out at Hall's Crossing Marina at Lake Powell in southern Utah.

*This is a developing story. This post will be updated with new information.*

Emergency water releases from reservoirs upstream of Lake Powell are underway to preserve the nation's second-largest reservoir's ability to generate hydroelectric power.

The Bureau of Reclamation started releasing additional water Thursday from Flaming Gorge reservoir in Wyoming. Additional water releases from Blue Mesa reservoir in Colorado and Navajo reservoir in New Mexico are planned to commence later this year. Emergency releases could last until at least December, and could extend into 2022.

Lake Powell is projected to hit a record low in July. It's situated on the Colorado River, a drinking and irrigation water source for more than 40 million people in the Southwest. Spring and early summer inflows to the massive reservoir were the third lowest on record in 2021. That followed a meager runoff in 2020.

The releases are meant to maintain some level of hydroelectric power at Lake Powell's dam, which is under increasing threat due its low level. Glen Canyon Dam's minimum hydropower level is at 3,490 feet above sea level. It's currently at 3,557 feet, and is forecast to drop to 3,515 feet by the end of April 2022.

Even above its minimum power elevation, production might become unfeasible due to turbine cavitation, when small air bubbles form and cause damage to the machine's inner workings.

Releases from Flaming Gorge Dam will increase by 50 cubic feet per second (cfs) every day until July 23. Daily releases from Flaming Gorge will rise from 860 cfs to 1310 cfs, "in response to basin-wide drought and storage concerns at Lake Powell," Reclamation staff told stakeholders this week.

The Colorado River basin states of Colorado, Wyoming, New Mexico and Utah agreed to possible federal intervention, under emergency circumstances, to boost Lake Powell's levels in [the 2019 Drought Contingency Plan](#). This is the first time this portion of the plan has been put into action.

"We are facing unprecedented dry conditions in the Colorado River Basin. More details about conditions as well as planning efforts are forthcoming," said Rebecca Mitchell, Upper Colorado River Commissioner for the state of Colorado. "What we do know is that the Upper Basin Drought Contingency Plan calls for increased coordination and planning in situations like this. And those agreements call for the Bureau of Reclamation to closely consult with the Upper Basin States, including Colorado. It has never been more critical to work together."

[A federal shortage declaration](#) in the river's lower basin is expected next month due to record low levels at Lake Powell's downstream sister reservoir, Lake Mead. The two are managed jointly by guidelines agreed to in 2007.

*This story is part of ongoing coverage of the Colorado River, produced by KUNC and supported by the Walton Family Foundation.*

Tags: Environment, Lake Powell, Topic: Western Water Coverage, Lake Mead, Colorado River Basin, Climate Change, Drought, Colorado Rivers



Luke Runyon

As KUNC's reporter covering the Colorado River Basin, I dig into stories that show how water issues can both unite and divide communities throughout the Western U.S. I produce feature stories for KUNC and a network of public media stations in Colorado, Utah, Wyoming, New Mexico, Arizona, California and Nevada.

[See stories by Luke Runyon](#)

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Luke Runyon, July 13, 2021

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# **Three Colorado River Basin reservoirs will be partially drained to keep Lake Powell producing hydropower**

Drought made an expected 2.5 million acre-feet of water disappear before it ever reached the key reservoir in the Colorado River Compact, forcing federal officials to siphon from Blue Mesa Reservoir and other big pools to protect the electric grid.

The nation's Western drought is so severe that federal predictions of Colorado River flows into Lake Powell for 2021 dropped by the equivalent of 10 Lake Dillons in just six months, according to a key new report.

In issuing the report Friday, U.S. water engineers said they will for the first time take water from Flaming Gorge, Blue Mesa and Navajo Reservoirs to protect electric power production at Lake Powell's Glen Canyon Dam, where water levels are in danger of falling below the electric turbine

intakes.

The bureau is now predicting 2.5 million fewer acre-feet of water coming into Lake Powell from natural runoff in 2021 than they had forecast six months ago. That loss is 10 times the entire working capacity of the Lake Dillon reservoir along I-70 in central Colorado.

The sobering 24-month prediction and dam operation plan from the Bureau of Reclamation said that while the decades-old system of massive storage buckets on the Colorado has served tens of millions of Western residents well, the extended drought and climate change forced an early and dramatic switch to Plan B.

"Here we are now in 2021, and the basic underlying assumptions that we've been able to rely on are beginning to erode," said Wayne Pullan, director of the bureau's Upper Colorado River Basin region.

Pullan said it's essential to begin refilling Lake Powell with the cooperation of other reservoirs, state officials throughout the basin, and environmental, agriculture and recreation interests, "now that we've reached that place we feared we might reach."

"It's going to require the best everybody has to give to thread this needle," Pullan said.

# Pain ahead for Upper Basin states

The new plan announced to shore up Powell for the rest of this year signals pain for all the Upper Colorado Basin states of Wyoming, Colorado, New Mexico and Utah. A lowered pool in upstream reservoirs can affect fishing, water recreation and more, with other conservation pilots in the works in coming years to pay ranchers to give up some of their water without relinquishing long-term rights.

Flaming Gorge Reservoir, on the Green River in Utah and Wyoming, will let an extra 13,000 acre-feet of water flow down river toward the Colorado in July, jumping to 42,000 acre-feet in August. By fall, Flaming Gorge will have contributed a total of 125,000 acre-feet to protect Lake Powell's hydroelectric pool.

Blue Mesa Reservoir, west of Gunnison, will contribute 14,000 acre-feet beginning in August, 18,000 in September and 4,000 in October, for a total of 36,000 acre feet. Blue Mesa dams the Gunnison River, which joins the Colorado River at Grand Junction.

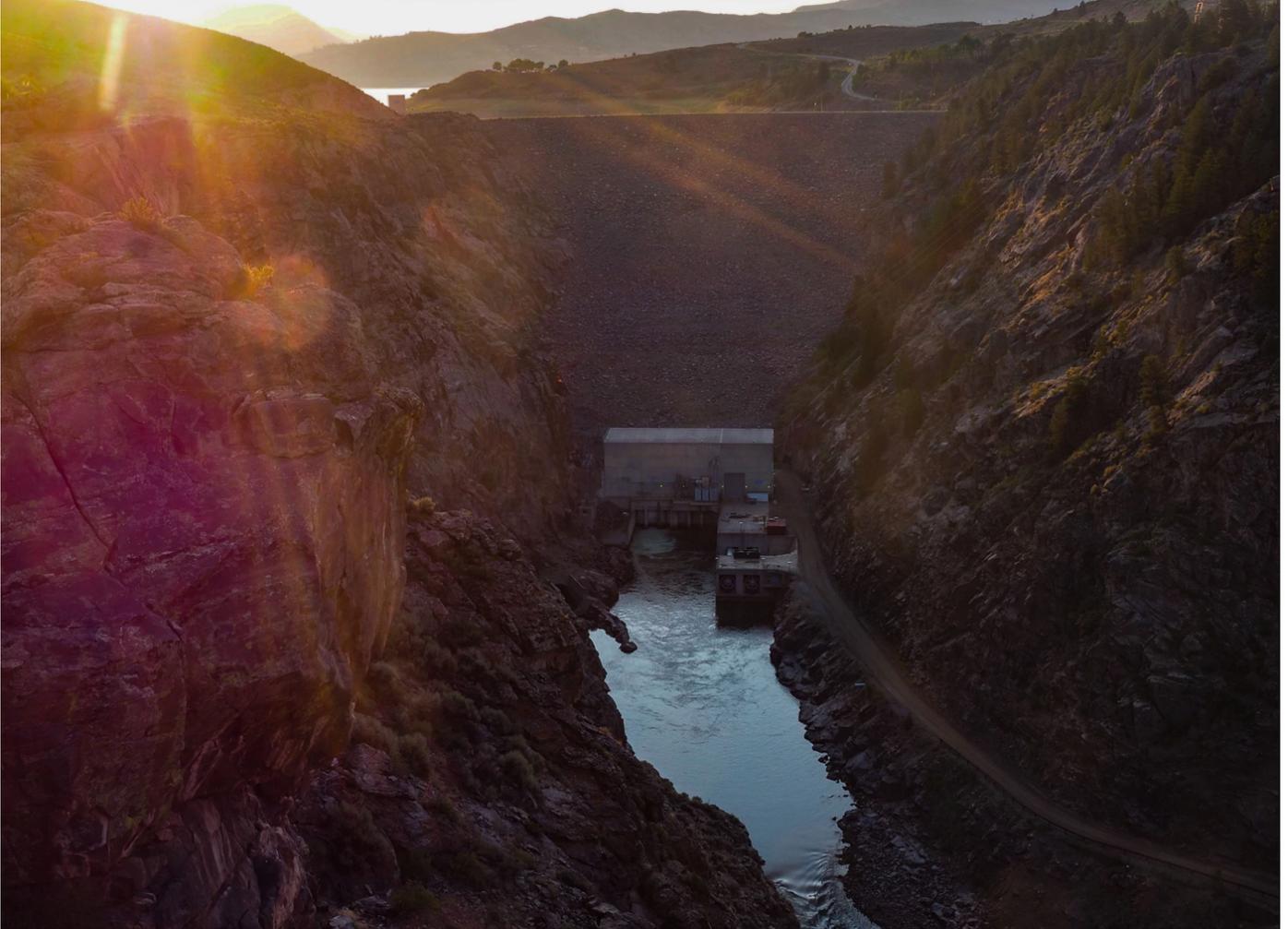
Navajo Reservoir, on the Piedra and San Juan rivers in southern Colorado and northern New Mexico, will give up a total of 20,000 acre-feet to Lake Powell in November and December. Taken altogether, the releases will raise Lake Powell 3 feet, enough to protect hydropower production. The

idea of banking extra water in Lake Powell from the upstream reservoirs [became the official federal plan in 2018](#).

Federal officials in a press briefing Friday said the extra releases will mean about an 8-foot drop in Blue Mesa's already-depleted pool, 2 feet from Navajo and 4 feet from Flaming Gorge.

"There's a disparity in the size of these reservoirs," said Christopher Cutler, a manager in the water and power services section of the Bureau of Reclamation. "The bigger the reservoir, the less the elevation drop will occur for the given amount of water."

The federal agency said it had no choice but to move more water for power operations at Lake Powell's dam after drought burned up their previous river predictions.



Blue Mesa Dam on Blue Mesa Reservoir near Gunnison, Colorado, on July 16, 2021. Federal officials will use water stored in Blue Mesa, Flaming Gorge and Navajo Reservoirs to raise the level of Lake Powell downstream in order to keep that important pool viable for producing hydroelectric power. (Dean Krakel, Special to The Colorado Sun)

Lake Powell will see only 3.2 million acre-feet of natural inflow this year, just 30% of a normal year's total, the bureau said. As part of the compact between Upper Basin states and the Lower Basin states of Nevada, California and Arizona, [the bureau will release a total of 8.23 million acre-feet from Lake Powell](#) to downriver users in 2021. The lake's enormous pool has drained precipitously in the ongoing 22-year southwestern drought.

"Yes, the snowpack wasn't great," Pullan said. "But the real

concern was the dry soils. And then on top of that, things just dried up.”

Water officials in western Colorado have spoken this year of soils stricken by long-term drought sucking down any runoff before it reaches streambeds, and of snowpack simply evaporating into warm air.

Another federal report pending in August is expected to verify long-anticipated cutbacks in 2022 releases from Lake Powell and Mead to Lower Basin compact states, [as the reservoirs fell below trigger levels set in the compact agreement between the seven states](#). Arizona will be the first to get severe cutbacks next year, expecting to lose as much as 500,000 acre-feet of water from levels it received in recent years. That will primarily mean a loss to farmers.

## **Impacts already being felt**

Upper compact states were not supposed to be affected by 2022 cutbacks under the official agreement. But Colorado water experts say the impacts of compact “calls” are already here.

“I would say that Colorado is already facing real consequences, but so far they have been limited to the agricultural community, mostly on the West Slope, and the environment, as streams run very low and warm,” said Andy

Schulteiss, executive director of the nonprofit Colorado Water Trust, which helps arrange water purchases to promote river health.

“Many ranchers and farmers have been cut off (by local providers) this year because of the extreme low flows, and many more will be in the coming months. That means their primary source of income is gone or severely limited,” Schulteiss said.

More formal compact cuts to water available in the Upper Basin states “seem inevitable and not far away,” he added.

The latest U.S. Drought Monitor puts nearly all of western Colorado in the “extreme” or “exceptional” drought categories, along with most of Nevada, Utah, Arizona and a large portion of California. Climate scientists have identified the current 20-plus years as [a western “megadrought” among the worst in 1,200 years.](#)

Federal officials announcing the partial refilling of Lake Powell Friday were asked what they will do if there’s no drought relief, and the upstream releases are not enough to last.

“We are preparing for that now, by modeling,” Cutler said. “So we’re modeling not only normal hydrology next year, but dry and extremely dry.”

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# Extreme actions underway to ensure Glen Canyon Dam can continue to generate power

Flaming Gorge will drop by 4 feet to keep water levels at Lake Powell above critical threshold for power generation



The growing crisis on the Colorado River came into sharper focus last week when the Bureau of Reclamation began emergency releases from [Flaming Gorge Reservoir](#) to shore up Lake Powell's declining levels, now at historic lows.

The move will bolster Powell's level by 3 feet in hopes of preventing it from dropping to a point where Glen Canyon Dam would not be able to generate electrical power, according to the agency's Upper Colorado regional director Wayne Pullan.

These releases from Flaming Gorge and two other reservoirs were triggered by interstate agreements crafted in response to historic drought conditions that are stressing water supplies across the West.

"Unlike an earthquake or a fire or a hurricane, it's not an imminent emergency, but it's been an emerging situation over many years," Pullan said Friday in a news media call.

"Because of the way this has emerged over the years, we've been able to have this agreement in place and to be ready to act. There's been no declaration of emergency. We consider this a response to an emerging, very difficult situation."

Thanks to poor runoff following a low-snow winter, inflows into Lake Powell, Utah's largest reservoir, are now about 30% of average.

"The real concern was the dry soils and then on top of that, things just dried up," Pullan said. "Sometimes you'll get a year where the snow pack is bad, but the spring will turn out to be wet. But we ended up with the dry spring and a dry summer."

The environmental group [Save The Colorado](#) argued last week's action is too little too late to have much of an impact, and accused the bureau of failing to account for how the changing climate has been diminishing the river's flows for years.

"This is nothing more than climate denial that robs Peter to pay Paul," said Gary Wockner, the group's executive director. "Draining upper basin reservoirs to try and prop up Lake Powell is likely a Band-aid placed over an arterial hemorrhage. We do not believe Lake Powell can be saved."

When full, the lake covers about 165,000 acres; today it covers only 74,000 acres. [Life is now returning to its many side canyons](#) and the Colorado River again flows through Cataract Canyon, where its famed rapids are gradually returning.

Nearly all of Utah is in either [exceptional or extreme drought](#), likely in response to climate change that has increased aridity in the West over the past two decades.

Prompting the decision to increase upstream releases was the [bureau's latest 24-month study](#) that Lake Powell's level would likely drop to a critical level next year. Even with these releases, totaling 181,000 acre-feet, the level could still fall below the target elevation, according to Pullan.

Because of century-old water-sharing agreements between the seven states that rely on the Colorado as a water source, the bureau cannot simply hold water back at Glen Canyon Dam. It is obligated to release predetermined amounts of water to satisfy Arizona, Nevada and California's shares.

Pullan said these agreements have served the Colorado River Basin states well, but they were based on flow assumptions that predicted a lot more water availability than actually exists today.

"Here we are now in 2021, and the basic underlying assumptions that we've been able to rely on are beginning to erode and we can't count on the hydrology. And when we can't count on the hydrology we can't count on the hydropower and hydropower revenues," Pullan said. "We're really in a new era."



(Paul Fraughton |The Salt Lake Tribune) Flaming Gorge Reservoir in 2011.

The releases will lower Flaming Gorge Reservoir, on the Green River, by 4 feet. Additionally, New Mexico's [Navajo Lake](#) on the San Juan River will give up 2 feet, while Colorado's [Blue Mesa Reservoir](#) on the Gunnison River will forfeit 8 feet.

"The difference in this—even though the largest volumes come from Flaming Gorge—is due to the fact that there's a disparity in the size of these reservoirs," Pullan said. "The bigger the reservoir, the less the the elevation drops will occur for the given amount of water."

The plan is to augment flows into the Colorado River by 181,000 acre-feet between now and the end of the year, with most of that water coming from [Flaming Gorge](#), whose increased releases started last week and will run through September, along with releases from Blue Mesa. Releases from the Navajo Lake reservoir will run October through December.

Pullan noted that these enhanced summer releases will improve habitat for the Colorado's endangered species of fish and increase power generation at a time of year when it's need most.

All three lakes are centerpieces of major recreation areas, as is Lake Powell where it has become all but impossible to launch boats at [Glen Canyon National Recreation Area](#).

Straddling the Utah-Wyoming state line, [Flaming Gorge is about 83% full](#), well above Utah's state average of 59%, according to the [Utah Department of Natural Resources](#).

Today, Lake Powell's water level sits at 3,556 feet above sea level and is barely one third full, according to [the bureau's database](#). That's more than 50 feet lower than it was at this point last year and 31 feet above a critical threshold of 3,525 feet, set to protect power generation at Glen Canyon Dam.

That threshold provides a 35-vertical-foot buffer above the point at which vortices created by the dam's hydroturbines begin to entrain air bubbles that would damage the generators, according to Christopher Cutler, who oversees water and power services at the BoR.

"The buffer is put in place for two reasons. One is to give us enough time to react to any future hydrologic changes. So if the river continues to decline, it gives us a little bit of buffer above the minimum power pool, which is 3,490 feet," Cutler said. "The other thing it gives us is a little bit of buffer against the creation of vortices."

# Governor Gordon Responds to Drought Conditions on Colorado River, Convenes Working Group



Flaming Gorge Reservoir

Courtesy photo

Governor Mark Gordon is convening a Colorado River Working Group that will meet regularly to discuss important Colorado River matters and monitor potential impacts to Wyoming. The action comes in response to drought conditions in the Colorado, Green and Little Snake River basins that have led the Bureau of Reclamation (Reclamation) to announce drawdowns from Flaming Gorge Reservoir in order to maintain minimum levels at Lake Powell.

At this time no restrictions on Wyoming water users are proposed.

The group is made up of representatives of key water use sectors of the Green and Little Snake River Basins, including agricultural, municipal, industrial and environmental interests. It will discuss and share Colorado River information with interested stakeholders in the Green and Little Snake River Basins. The Working Group is a continuation of a coordinated and proactive outreach effort that has been underway in Wyoming since 2019. More information about the Colorado River Working Group's inaugural public meeting will become available soon.

"The West finds itself facing unprecedented drought conditions and Wyoming must be prepared to address the potential future impacts of water shortages," Governor Gordon said. "It is important that local perspectives on issues that impact our water users and the State are heard and included in the process. I want to ensure that representatives of key water use sectors are able to provide input on this crisis, which is challenging us today and may last for years."

## **More from this section**

In its [24-Month Study released today](#), Reclamation confirms continual declining hydrologic conditions for the Colorado

River system. The results show that drought response releases from key Reclamation reservoirs in the Upper Colorado River Basin -- including Flaming Gorge Reservoir in Wyoming and Utah -- will be necessary starting this summer.

Based on Reclamation's announcement, 125,000 acre-feet of water from Flaming Gorge Reservoir will be released to protect storage elevations in Lake Powell. These releases will be staged July through October and will likely result in Flaming Gorge water elevation dropping an additional 3.5 feet by mid-autumn. No Wyoming water rights are tied to the water being released, so no Wyoming water right holders will be affected.

Today's announcement from Reclamation underscores that water supply throughout the West is becoming less reliable, especially in the Colorado River Basin. The Governor is committed to ensuring that Wyoming's water users are protected under the state's apportionments provided for under the 1922 Colorado River and 1948 Upper Colorado River Basin Compacts. The Governor is also committed to continuing collaboration on water management and operation solutions which provide overall water supply reliability and certainty, as well as meeting Compact and Treaty obligations and maintaining environmental commitments, all of which make the system work for all who

depend on the Colorado River.

Knowing the increasing risks, Wyoming has planned ahead. In 2019, Wyoming signed onto the Drought Contingency Plan alongside the other Colorado River Basin States and the Department of Interior. This plan helps protect critical elevations at Lake Powell, which is an important insurance policy for Wyoming to bolster the State's ability to maintain and develop its water uses while also satisfying its compact obligations. The drought response releases are part of the plan's overall strategy to help prevent curtailment triggers under the 1922 Compact.

# Group calls plan to boost Lake Powell levels a 'Band-Aid'

The Bureau of Reclamation is taking emergency measures to keep Lake Powell from falling to critically low levels. The contingency operations call for releasing water from three reservoirs, including Flaming Gorge, to give Lake Powell a small boost.

But the group Save The Colorado is calling the plan a "Band-Aid" and said it won't be enough to save Lake Powell.

Pictures this year have shown the situation at Lake Powell. Low levels revealed [boat wrecks and places to camp](#) that used to be underwater. Boat ramps have had to close down.

Numbers recently released by the Bureau of Reclamation give that same picture in numbers.

**READ: [Lake Powell approaching historic low levels](#)**

"The July 2021 Operation Plan for Colorado River System Reservoirs 24-Month Study (July 24-Month Study) shows that the Lake Powell water year 2021 predicted unregulated inflow volume has decreased 2.5 million acre-feet in the six-month period between January and July 2021," the Bureau

stated in a press release. "The current forecast for WY2021 is 3.23 maf (30% of average)."

Five-year projections, also just released, show there's a 79 percent chance Lake Powell will fall below the 3,525-foot target elevation. That elevation is in place, the Bureau of Reclamation explained, to allow for a 35-foot buffer above the minimum elevation of 3,490 feet.

That minimum elevation, the Bureau of Reclamation explained, is in place to protect Glen Canyon Dam infrastructure and to "meet current operational obligations to the Lower Basin States of Arizona, California and Nevada."

"The plan to try to save the hydropower at Glen Canyon Dam right now involves taking water out of Flaming Gorge, out of Blue Mesa in Colorado, and out of Navajo Reservoir in New Mexico," explained Gary Wockner, the director of Save The Colorado.

According to Bureau of Reclamation numbers, 69 percent of that water will come from Flaming Gorge. Blue Mesa will provide 19 percent, and Navajo Reservoir will supply 11 percent.

That water is expected to raise Lake Powell's elevation by three feet.

**READ: [Colorado River system poised for first-ever](#)**

## [official shortages](#)

"This doesn't actually fix anything," Wockner said. "It doesn't create any new water at all. It just moves the water around. And so, it's a very temporary way to address the issue. It's a Band-Aid."

Save The Colorado, along with Center for Biological Diversity and Living Rivers, filed a lawsuit back in 2019 in regards to climate change and Glen Canyon Dam. The lawsuit claims that the federal government ignored climate change science in its Drought Contingency Plan and also failed to comply with the National Environmental Policy Act.

"This year, the flows are actually even 50 percent less than what we sued them over," Wockner explained.

The lawsuit, which Wockner said is still in federal district court in Prescott, Arizona, asks the Department of Interior and Bureau of Reclamation to redo an alternatives analysis.

"Everything that the climate scientists have predicted could happen, does appear to be happening," Wockner said. "And the Bureau of Reclamation Department of Interior haven't planned for it in how they manage that dam. And so now they're in, quote-unquote — it's their word — 'emergency.'"

**READ: [Boat ramps across Utah closed or restricted due to drought](#)**

In the most recent release, the Bureau of Reclamation stated that the agency and the Colorado River Basin states "continue to work together cooperatively to closely monitor projections and conditions and are prepared to take additional measures in accordance with the DROA [Drought Response Operations Agreement]."

Wockner and Save The Colorado argue there are additional measures that can be taken — like doing away with Glen Canyon Dam altogether.

"Glen Canyon Dam is almost primarily a hydropower plant, and there's lots of other ways to make electricity rather than use the water of the Colorado river," Wockner said.

The Reclamation said it continues to remain committed to reducing the collective risk of both Lake Powell and Lake Mead falling to critical elevations, "and will continue to work with entities in the Colorado River Basin to ensure that both facilities continue to function as authorized to meet the natural, municipal and agricultural needs of the basin."

# Lake Powell bans houseboats, starts extending boat ramps amid drought, low water levels



Lake Powell is in emergency mode.

Record drought this year has accelerated the decline in water levels at the massive reservoir behind Glen Canyon Dam, and officials are taking unprecedented steps to deal with the rapidly changing conditions.

On Thursday, the Glen Canyon National Recreation Area announced it would be rehabilitating and extending launch

ramps to accommodate boat launching during low water conditions.

Then on Friday, the park announced the Wahweap ramp would be closed on Saturday while a dive team assessed if boats could still safely enter the lake.

And on Saturday, the park banned houseboats on the lake and asked owners to retrieve their vessels as soon as possible.

"Please be aware that due to the ongoing effects of climate change-induced drought, lower water levels are forecast to impact Lake Powell for the foreseeable future and will impact water access points and boat launch areas," a Saturday press release said.



While the park has tried to mitigate the water evaporation by using boilerplate ramp extensions, officials said that at the current rate of water loss, only 60 feet of temporary boilerplate will remain by Pioneer Day.

According to [U.S. Bureau of Reclamation data](#), Lake Powell's pool elevation is at 3,556 feet — 26 feet below the recorded minimum and 52 feet below the measurement at this time last year.

Once the lake drops only five feet more, the Wahweap Main Launch Ramp will "likely become unusable for all motorized watercraft," a press release said.

The effects of low water levels will likely impact the lake's water access points and boat launch areas over the next several months, officials said.

**ICYMI:**[Opposition to Lake Powell Pipeline heats up as activists call for a federal investigation](#)

"It is not possible to predict with certainty how water levels at Lake Powell will fall and rise in response to a wide range of factors. It is imperative that boaters check the park's website about the status of preferred launch destinations before heading to the lake," a press release said.

*K. Sophie Will is the National Parks Reporter for The Spectrum & Daily News through the Report for America initiative by The GroundTruth Project. Follow her on Twitter at [@ksophiewill](#) or email her at [kswill@thespectrum.com](mailto:kswill@thespectrum.com). Donate to Report for America [here](#).*

# Lake Powell water levels to be propped up by upstream reservoirs

Federal officials will release water from reservoirs upstream to raise Lake Powell's water levels.



Lake Powell, behind Glen Canyon Dam, is seen near Page, Ariz. (AP Photo/Felicia Fonseca, File)

**Federal officials will release extra water from Colorado River system reservoirs this year to prop up the declining**

**water levels in Lake Powell, protecting the reservoir from reaching a level that would prevent the Glen Canyon Dam from generating electricity.**

**The unprecedented move, announced Friday by the U.S. Bureau of Reclamation, underscores the dire consequences of a two-decade drought that has plagued the Colorado River, which serves 40 million people in seven states and Mexico.**

**Projections released by the bureau last week showed a 79 percent chance that Lake Powell's water level will fall below an elevation of 3,525 feet within the next year, according to a news release.**

**That elevation is significant because it provides a 35-foot buffer from the minimum water level that allows the Glen Canyon Dam, a major power source for the West, to generate electricity.**

**By the end of the year, an extra 181,000 acre-feet of water — nearly 60 billion gallons — will be released from Flaming Gorge Reservoir, Blue Mesa Reservoir and Navajo Reservoir to prop up Lake Powell's water level by about 3 feet.**

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**Wayne Pullan, the Bureau of Reclamation's regional director for the Upper Colorado Basin, told reporters that a combination of a lackluster snowpack, dry soil and dry weather has affected how much water flowed into the river.**

**Dry soil acts as a sponge to soak up runoff before it can reach the river.**

**The releases from the upstream reservoirs will not affect how much water is released to Lake Mead, which is nearing its first federally declared water shortage. A shortage declaration would force a cut in Nevada's allocation of water from the lake next year.**

**Christopher Cutler, manager of water and power services for the bureau, said the releases from the upstream reservoirs are not necessary for Lake Powell to meet its water release obligations to Lake Mead.**

**This week, the declining health of the Colorado River prompted a coalition of environmentalists, elected leaders and officials from business and agriculture to [call for a new approach to managing the vital water source](#).**

**The group wants a moratorium on new diversion projects, including a pipeline that would carry billions of gallons of water to southwestern Utah from Lake Powell. It also wants new development to have sustainable water supplies identified before building begins.**

**Contact Blake Apgar at [bapgar@reviewjournal.com](mailto:bapgar@reviewjournal.com) or 702-387-5298. Follow [@blakeapgar](https://twitter.com/blakeapgar) on Twitter.**

# Outlets At Blue Mesa, Other Upstream Reservoirs Opened To Raise Near-Critical Water Level At Lake Powell

[Logan Smith](#) July 17, 2021 at 11:59 pm

**(CBS4)** — Amid predictions that the water surface at Arizona's Lake Powell will likely encroach on levels needed to maintain power generation at its dam for the first time since it was initially filled, the U.S. Bureau of Reclamation has taken the first step toward addressing the problem with water from upstream reservoirs.

The bureau announced Thursday that it was increasing the amounts of water released from Flaming Gorge Reservoir, Blue Mesa Reservoir and Navajo Reservoir, starting immediately.

**READ MORE:** [Voluntary Fishing Restrictions On Colorado River Could Become Mandatory If Conditions Don't Improve](#)

The agency predicted last week that there was a 79 percent chance of Lake Powell's water elevation dipping below 3,525 feet in the next year.

The agency believes the risk of damage to Glen Canyon Dam's power-generating turbines begins at 3,490 feet.



Lake Powell (credit: U.S. Bureau of Reclamation)

The increased water released from the upstream reservoirs is expected to increase Powell's water level by three feet.

"We haven't declared any sort of formal emergency on the Colorado River," said [Wayne Pullan](#), Regional Director of the bureau's Upper Colorado River Region. "But," he said, comparing it to sudden natural disasters like earthquakes or hurricanes, "it's been an emergence over several years."



Wayne Pullan (credit: U.S. Bureau of Reclamation)

In a virtual press conference Friday, Pullan and several Bureau of Reclamation officials suggested Lake Powell's water level is nearing a "critical" condition.

"The assumptions we've worked on are starting to erode," Pullan said. "A lot of vision went into the drought response. Now we've reached that place. We hoped to never go down

this road. But now we have to."

[Recent monitoring](#) showed Lake Powell's inflow volume decreased 2.5 million acre-feet in the first six months of 2021. The new releases will occur over the last six months.

"This doesn't solve the whole problem, but it's a strong mitigating action," Pullan said.

With the increased releases, Flaming Gorge Reservoir, located on the Wyoming-Utah border, will lose an estimated four feet of elevation. Navajo Reservoir, on the Colorado-New Mexico border, will drop about two feet.

Blue Mesa Reservoir in central Colorado is expected to fall eight feet. It will be the first to contribute and the first to return to normal output, while the others will add their water in the later months.

**READ MORE:** [Pipeline Dream: Ambitious Proposal To Bring Utah Water To Colorado](#)

(credit: U.S. Bureau of Reclamation)

The releases are part of a plan established in May 2019 by the bureau and the states involved, namely Colorado, Wyoming, Nevada, Arizona, Utah and southern California (a.k.a. the Colorado River Basin states). The [Upper Basin Drought Response Operations Agreement \(DROA\)](#) does not include specific instructions for dealing with drought, but implies the states will work cooperatively [as they have in the past](#).

“One of the things I love about working on the Colorado

River is the attitude of collaboration and cooperation," Pullan said. "We've been doing this for a long time. Each state has its own politics and priorities. But we have a tradition of working these things out."

Blue Mesa Reservoir (credit: CBS)

There is hope, but no guarantee, the additional releases will work precisely as intended.

"If additional water needs to be moved, that's something that will be addressed in the next few weeks," said Christopher Cutler of the bureau's Water and Power Services Division.

"We are preparing for that now. We're modeling not just 'normal,' but 'dry' and 'extremely dry.'"

The current forecast is for Powell to receive about 30 percent of its average inflow over the course of 2021.

"What happened was the inflows we were receiving into Powell were low or record low throughout the water year," said Heather Patno, a hydraulic engineer with the bureau's Water Management Group, on Friday. "The soil is part of that, the spring runoff was lacking, the soil moisture was off..."

[Lake Powell](#) is considered full when its water elevation reaches 3,700 feet. Its level [Friday measured](#) just shy of 3,557 feet.

This month's publication from Colorado State University's Colorado Water Center contained an [article on Colorado River inflow trends](#). It stated both Powell and Mead have lost more than half of their volume from that which was measured in 2000. It attributed the loss to temperature change.

Also on Friday, representatives from farmers, businesses, local municipalities and conservation groups spoke at a [press conference](#) on Lake Mead's Hoover Dam. They demanded lawmakers and water officials halt future

Colorado River diversion projects during the current shortage of water in Powell and Mead. They cited the proposed 140-mile [Lake Powell Pipeline](#) to St. George, Utah, as an example.

**MORE NEWS:** [6 Western States Blast Utah Plan To Tap Colorado River Water](#)

# Robbing Peter to save Powell The Bureau of Reclamation is draining reservoirs to fill reservoirs

The Horseshoe Bend overlook, which affords some 50,000 selfie-snappers a month a gander at the Colorado River as it bends back on itself, is surely one of the most popular viewpoints in the Southwest. I've passed it many a time but have never been tempted to stop. Instead, I rev the engine on the ol' Silver Bullet, drive into the western fringe of Page, past the McDonald's and the most-out-of-place golf course on the planet, and then take a left turn to get to my favorite viewpoint: The one that offers a stunning, explicit, full-frontal look at Glen Canyon Dam.

It gets me every time – an almost physical blow to the gut coupled with the insta-vertigo inflicted by confrontation with the sublime.

I'm not sure what it is about the dam that invokes such a strong reaction. Perhaps it's just the sheer size – 700-feet high, 1,500 feet long at the crest, 300 feet thick at its base – or the ungodly amount of water it holds back. Maybe I'm mourning the hundreds of miles of Edenic canyons that were

inundated. Maybe it's a combination of terror and anticipation of the power that would be released if the dam finally cracked and crumbled.

Or maybe it's the hubris that the dam represents, the belief that, with enough concrete and engineering ingenuity, we humans could control that wild, tumultuous creature known as the Colorado River and harness it to turn thousands of miles of desert into lawns and alfalfa fields and golf courses and housing developments. Sure, it worked. Until it didn't. And now Lake Powell's water levels have taken a great fall, and all of Bureau of Rec's engineering, and all of Bureau of Rec's plumbing, can't put Powell back again.

Still, they're trying. Last week the Bureau of Reclamation announced that it would crank open a few valves on the massive plumbing system known as the Upper Colorado River, releasing extra water from Flaming Gorge, Blue Mesa and Navajo reservoirs in order to shore up the rapidly declining water levels in Lake Powell.

The point of this exercise is not to keep houseboats from scraping bottom – which is already happening – but to preserve what remains of Glen Canyon Dam's hydropower generating capacity. Already the dam has become less potent in this respect, because as water levels drop, so does the pressure the water exerts, meaning that the same amount of water run through the turbines generates less

power. More worrisome is what happens when the level falls below 3,490 feet, or the minimum power pool: Generation stops altogether.

That would mean that Glen Canyon Dam's electricity output would plummet from 10,000 megawatt-hours or so of juice each day – enough to power some 350,000 homes – to near zero. That would be very bad for the Southwestern electricity grid, which is already strained by heat-induced soaring demand coupled with diminished hydropower generation across the West. Grid operators would have little choice but to turn to natural gas to fill the gap, increasing greenhouse gas emissions and electricity costs.

Over the course of one month, from mid-June to mid-July, Lake Powell lost 416,000 acre feet of water – or 135 billion gallons (which translates to about 5½ feet of surface-level elevation). About 36,000 of those acre feet vanished via evaporation. The rest was sent through Glen Canyon Dam's turbines, destined for the Grand Canyon and then shrinking Lake Mead. If levels continue to drop at that rate, Powell will reach minimum power pool a year from now. (The Bureau of Reclamation is projecting a slower rate of decline, even in its worst case scenarios.)

The feds know they can't stop the drop with this scheme. But via the planned releases – totaling an additional 181,000 acre feet over the next six months – they can slow it down,

theoretically. Instead of falling another 28 feet by the end of the year, the surface level should only drop by, wait for it, 25 feet, assuming a continuation of current rates of decline. Basically, the Bureau is draining down three reservoirs in order to offset evaporation from Lake Powell.

It just might succeed, in delaying the inevitable. But without a lot of help from Mother Nature in the form of massive winter snowfall across the entire Upper Colorado River watershed, there is little chance that the planned plumbing adjustments will amount to much. And if the snows don't come, what happens to the depleted upper basin reservoirs and the people who rely on them?

The plan seems even crazier in light of a proposal to build a pipeline that would siphon yet more hydropower-generating water from Lake Powell and ship it to southwestern Utah, or plans to divert yet more water from the Colorado River Basin toward the urban centers of Colorado's Front Range. But then, none of it is any crazier than building the dam in the first place with the belief that doing so would turn a desert into an oasis.

The Land Desk is a thrice-weekly newsletter from Jonathan P. Thompson, longtime journalist and author of *River of Lost Souls*, *Behind the Slickrock Curtain*, and the forthcoming *Sagebrush Empire*. To subscribe, go to [www.landdesk.org](http://www.landdesk.org). n

# State engineers developing measurement rules for water diversions

23h ago



**Scott Hummer, water commissioner for District 58 in the Yampa River basin, checks out arecently installed Parshall flume on an irrigation ditch in this August 2020 photo. Compliance with measuring device requirements has been moving more slowly than state engineers would like. (Heather Sackett/Aspen Journalism)**

Colorado officials are preparing for a future with less water by developing rules and guidance for water users to measure

how much they are taking from streams.

State Engineer with the Colorado Division of Water Resources Kevin Rein is planning a rule-making process on measurement devices that includes stakeholder input.

Although state engineers in each water division have the authority to enforce the requirement of measurement devices, Rein said drafting more formal rules through an administrative rule-making process, instead of an ad hoc push like in the Yampa River basin, would affirm that authority.

Rules would also include specific technical guidance on the best types of flumes, weirs and meters to use for different types of diversions.

"The idea about rule-making is that we would have consistent guidance across the basin, developed through a formal process," Rein said. "One thing I've found is that when you have stakeholder involvement in the development, then you have stakeholder buy-in during the implementation."

### **Yampa/White/Green river basin**

Division 6 Engineer Erin Light is still taking a lenient stance with water users in the White and Green river basins while

the measurement rules are developed. In fall 2019, Light ordered nearly 500 water users in the Yampa River basin to install measuring devices to record their water use and initially received some push-back from agricultural water users unaccustomed to measuring their diversions.

In March 2020, Light issued notices to water users in the White and Green, but decided to delay sending formal orders after the COVID-19 pandemic disrupted the economy. Orders are still on pause while Rein's office develops the measurement rules, which would apply across the Western Slope.

"It made more sense to wait for the measurement rules to at least get started, maybe not necessarily get completed, but allow Kevin to get out and start doing the stakeholder meetings and encourage these structures to be installed without orders," Light said.



**Sprinklers and a ditch irrigate this section of Crystal River Ranch outside of Carbondale on Wednesday. According to state officials, about 95% of diversions in the Crystal and Roaring Fork River basins already have measuring devices. (Heather Sackett/Aspen Journalism)**

Compliance is gradually increasing across the basin, but at a slower pace than Light would like. In January 2020, 49% of diversions in the Yampa River basin did not have a measuring device; as of April 2021, 42% were still without one. White River basin compliance has improved from 83% without a measuring device to 68% over the same time period; water users in the Green have gone from 69% to 49%. As a whole, Division 6 has gone from 55% of diversions without measuring devices to 46%.

“I would have hoped that we would have had more compliance at this point,” Light said. “I look at those numbers and think we still have some work in front of us and how are we going to accomplish our goal, which is to assure that all of these structures that we maintain records on have operable headgates and measuring devices.”

In some basins on the Western Slope, nearly all diversions already have measuring devices. For example, in the Roaring Fork and Crystal river basins, about 95% of the structures have devices, according to Colorado Department of Natural Resources Communications Director Chris Arend. That’s because there has traditionally been more demand and competition for water in these basins, he said.

### **Water shortages drive measurement push**

The push for Western Slope diverters to measure their water use comes down to impending water shortages. Division 6, in sparsely populated northwest Colorado, has traditionally enjoyed abundant water and few demands, but as climate change tightens its grip on the West, there is less water to go around. Calls by senior water users have gone from unheard of to increasingly common in just the last few years.

“We definitely have systems on call that have never been on call,” Light said of current conditions in the Yampa.

A call occurs when a senior water rights holder is not getting their full amount they are entitled to. They place a call with state engineers, who shut off more junior water rights users so the senior user can get their full amount. Under Colorado's prior appropriation system, the oldest water rights have first use of the river.

"If you don't have a measuring device during a call, we are shutting you off, period," Light said.

As the threat of a Colorado River Compact call and the possibility of a state demand-management program grow, state officials say the need to measure water use grows, too.

A compact call could occur if the upper-basin states — Colorado, Utah, Wyoming and New Mexico — were not able to deliver the 75 million acre-feet of water over 10 years to the lower basin states — California, Arizona and Nevada — as required by the 1922 compact. Colorado water managers desperately want to avoid this scenario, in part because it could trigger mandatory cutbacks for water users.

If a compact call were to play out, measuring devices would be crucial, because as Rein says, you can't administer what you can't measure.

"We need to better measure what has been diverted, so having measurement rules and therefore measuring devices

in place will be critical to prepare for and implement compact administration, should it happen," he said.

The state is also currently exploring a potential demand management program, which would temporarily pay irrigators to not irrigate and leave more water in the river. The goal would be to boost water levels in Lake Powell and avoid a compact call. But in order to participate in the voluntary program, feasibility of which is still being evaluated, irrigators need to first measure their water diversions.

"We would have to know how much they were using in the years before, before we can give them credit for not using it," Rein said.



This Parshall flume, which was installed in the Yampa River basin in 2020 and is shown in this August 2020 photo, replaced the old, rusty device in the background. State engineers are redeveloping rules for measuring devices, which would apply to the entire Western Slope. (Heather Sackett/Aspen Journalism)

## **Low interest in grant funding**

One of the reasons Light originally paused enforcing the measurement device requirement in the White River basin was to give conservancy districts time to secure grant money to help irrigators pay for the potentially expensive infrastructure. But there was not much interest from water users in getting grant money, according to Callie Hendrickson, executive director of the White River &

## Douglas Creek Conservation Districts.

“We did not proceed with (securing grants),” she said. “We didn’t hear from very many people that they were seeking funding.”

The story was similar on the Yampa. The Upper Yampa Water Conservancy District had a \$200,000 pot of money — half of it state grant money and half from the district — to reimburse water users for installing measuring devices. Irrigators can get 50% of their costs covered, up to \$5,000 through the first tier of the grant program. According to Public Information and External Affairs Manager Holly Kirkpatrick, despite a very simple application process, the program has doled out just under \$40,000 so far for about 20 projects.

“I had certainly hoped to have more interest in the first year of the program,” she said.

As Rein plans for webinars and meetings with water users later this summer and fall, the situation in the Colorado River basin grows more dire. The Bureau of Reclamation this week began emergency releases from Upper Basin reservoirs to prop up levels in Lake Powell to try to maintain the ability to produce hydroelectric power at Glen Canyon Dam.

“I recognize the value in having measurement rules as soon

as possible because, yes, they would be extremely helpful if we need to take measures toward compact administration," Rein said. "Having more data sooner rather than later is important."

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