

Journal #5788 from sdc 8.15.24

Tamales Connection

Some of Arizona's Most Valuable Water Could Soon Hit the Market

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[Some of Arizona's Most Valuable Water Could Soon Hit the Market](#)

A small tribal community along the Colorado River could become a major player in the state's water supply.



The Colorado River Indian Tribes have the right to divert 662,402 acre-feet of water per year from the Colorado River for use on their lands in Arizona. Congress recently granted the tribes authority to lease some of this water to entities elsewhere in the state. Photo © Brett Walton/ Circle of Blue

By Brett Walton, Circle of Blue – August 12, 2024

PARKER, Arizona – South of Headgate Rock Dam, beyond riverbanks lined with willow and mesquite, the broad floodplain of the Colorado River spreads across emerald fields and sun-bleached earth.

The Colorado River has nourished these lands in present-day western Arizona for millennia, from the ancestral Mohave people who cultivated corn, squash, beans, and melons, to the contemporary farmers of the Colorado River Indian Tribes, or CRIT, whose reservation extends for 56 miles along its namesake river.

CRIT has rights to divert a large volume of Colorado River water – nearly 720,000 acre-feet in Arizona and California combined, which is more than twice Nevada's allocation from the river. To this point, the water has remained within the bounds of the CRIT reservation. But soon, the water might flow to lands far beyond CRIT's borders.

Due to an [act](#) of Congress signed into law in January 2023, CRIT now has the authority to lease or exchange its water for use elsewhere in Arizona. (The authority does not apply to water rights held by CRIT on the California portion of its reservation.) [Agreements](#) signed in April with the Arizona Department of Water Resources and the federal Bureau of Reclamation to fulfill administrative requirements in the legislation brought the tribes another step closer to greater control over their water.

What remains is the work of negotiation, both within CRIT and with potential leaseholders. CRIT leadership must decide what it wants in leasing deals – how much water to part with, to whom, for what price, and for how many years. And they will have to find a partner who agrees to those terms.

CRIT's leasing authority opens a new chapter, not only for the tribes but for other water users in the state who might covet CRIT's high-value, high-priority Colorado River water. Leasing this water would represent a financial windfall for CRIT's more than 4,600 enrolled members. CRIT leadership has framed it as an economic and civic development opportunity. For those on the other side of the deal – be they environmental groups, farm districts, mining companies, or fast-growing cities in the center of the state – it is a rare chance for a relatively secure source of water in an arid region where most supplies are already claimed or running out. Homebuilders west of Phoenix, for instance, have recently seen their access to local groundwater [restricted by state regulators](#).

For CRIT leaders, the new powers come at an auspicious time. They see their duty as stewards of the river intersecting with the mounting challenges of maintaining Arizona's desert empire amid merciless heat and a drying climate.

“With the climate crisis and the drought going on at the present time, there's going to be a major shortage of water,” Dwight Lomayesva, CRIT Tribal Council vice chairman, said at a conference in March. “But we would like to be part of the solution to the problem.”

A Valuable Asset

CRIT is a union of sorts. Four tribes with distinct histories live on the 278,000-acre reservation that spans Arizona and California. The Mohave, known for farming and beadwork, and the Chemehuevi, masterful basket weavers, were original inhabitants of the land. The Hopi and Navajo came later. The federal Bureau of Indian Affairs relocated members of the two northeastern Arizona tribes to the area after World War Two.



Some 79,350 acres are farmed on the Arizona portion of CRIT's reservation. More acres are dedicated to alfalfa than any other crop. Photo © Brett Walton/Circle of Blue

CRIT's history and location translate into a strong water rights position. Like in most western states, water in Arizona is based on a priority system. “First in time, first in right,” as the saying goes. Junior users, who have a later priority date, are cut off first in times of shortage, while senior users like CRIT who have earlier claims can continue to divert.

CRIT's reservation along the banks of the Colorado was established in 1865, making it one of the first in time in Arizona for water rights – and one of the last to lose access to water. Crucially,

leased water retains its place in the priority system. That’s what makes it valuable, said Cynthia Campbell, the water resources management adviser for Phoenix. “That’s front of the line, basically.”

Not only does CRIT have secure water. The tribes also have a lot of it. Comparatively speaking, their water rights are massive. A display at the CRIT Museum makes the point visually. Tubes of foam insulation painted blue depict the volume of water held by tribes along the lower Colorado River. CRIT has the right to divert 662,402 acre-feet per year to its Arizona lands and 56,846 acre-feet to its much smaller landholdings across the river in California. The museum display reflects this bounty – the blue foam bar representing CRIT’s water towers over the others.

For now, CRIT is keeping its water leasing intentions close to the vest. Chairwoman Amelia Flores and Tribal Council members declined to be interviewed for this story.

John Bezdek, CRIT’s lawyer, said that Tribal Council had been focused on finalizing the state and federal agreements and is now turning its attention to how it might structure leases. “There’s a number of additional steps that need to be done in terms of developing a water code, developing provisions on how proposals will be evaluated, looking at those types of things,” Bezdek said. “And so that is all being done right now. We’re working on the next steps internally.”

Despite that public reticence, the contours of CRIT’s thinking have been previewed in other venues. Vice Chairman Dwight Lomayesva outlined his thoughts on the matter in a panel discussion earlier this year, when he participated in the [Eccles Family Rural West Conference](#), held in Tempe, on March 27.

Lomayesva reiterated the cultural and spiritual significance of the Colorado River to his people. “We want to save the river,” he said. “We’re not just a benevolent nation trying to help other countries and tribes and water districts.”



Dwight Lomayesva, vice chairman of the Colorado River Indian Tribes, speaks at the Eccles Family Rural West Conference, held in Tempe, Arizona, on March 27, 2024. Photo © Bill Lane Center for the American West, Stanford University

CRIT has a history of working with state and federal agencies to protect the Colorado River. The tribes participated in a [pilot farmland fallowing program](#) from 2016 to 2019, in which they saved 45,373 acre-feet for storage in Lake Mead. That deal was the precursor to a [larger commitment](#) in 2020, when the tribes pledged to fallow 10,000 acres of farmland and store 50,000 acre-feet of

water per year in the basin's largest reservoir. For the three-year effort, the tribe earned \$38 million, from the state and the Environmental Defense Fund.

CRIT's capacity to lease water is directly related to the farming operations that take place on the reservation. About 79,350 acres are farmed on its Arizona lands, mostly for alfalfa. Some of the land is farmed by a tribal enterprise, but many of the acres are leased by non-tribal members. A majority of the fields are flood irrigated, an inefficient method in which only half of the water is taken up by the crop. The rest eventually flows back to the river or evaporates.

This is important because CRIT can only lease water that it has put to consumptive use in at least three of the previous five years. The consumptive-use stipulation is part of the agreement signed with Arizona and Reclamation in April. CRIT diverts less Colorado River water than its allocation, so the agreement dictates that the tribes can't part with unused water to which they have rights but bypasses their fields. In effect, it means that water conserved from farming is water that can be leased.

"That's a very, very important component that we then have to factor into in terms of how we want to develop the program," Bezdek said.

A huge impediment is CRIT's obsolete means of moving water to its fields. The Bureau of Indian Affairs, a federal agency, owns and operates the Colorado River Irrigation Project, an irrigation system that is, by all accounts, deteriorating and badly needs repair. It was developed piecemeal starting in the 1870s and diverts water into the main line canal at Headrock Gate Dam. Two-thirds of the 232 miles of lateral canal are made of packed dirt, Lomayesva said. (All quotes from Lomayesva in this piece are from his comments at the March conference.)

Lomayesva said that one study pegged the cost of rehabilitating the system at \$300 million – an amount of money that CRIT cannot afford. And even if it could, Lomayesva said that because the tribes do not own the water delivery infrastructure, they would hesitate to invest in it. But he said that leasing deals could provide the capital for farming on the reservation to become more efficient.

"We're going to only market the water if we can use those funds to develop conservation systems – sprinklers instead of flood [irrigation], pipes instead of dirt ditches, recycle some of that water and reuse it again," Lomayesva said. "That's the only reason why we would market our water."

Others have concluded that the outdated irrigation system is a hindrance. "The high cost to repair infrastructure, including lining canals, reconstructing gates and turnouts, and realigning reaches of the system, limit the Tribes' ability to realize the full potential value of its water," according to a 2018 Bureau of Reclamation [study](#).

CRIT recently asked BIA to increase the amount it charges for irrigation water because the tribes believe that the system is underfunded and additional revenue could improve the irrigation infrastructure.

BIA did not respond to interview requests.



The Bureau of Indian Affairs, a federal agency, owns and operates the canal system that supplies the Colorado River Indian Tribes reservation with irrigation water. The system, which draws from the Colorado River, was developed piecemeal starting in the 1870s and needs repair. Photo © Brett Walton/Circle of Blue

Tribal members voted on an [ordinance](#) in 2019 that endorsed leasing and set certain boundaries for its implementation. The ordinance, which passed with 63 percent of the vote, was the result of an attempt a year earlier to recall all nine council members over some residents' objections to leasing. Two council members, including former chairman Dennis Patch, lost their seats.

Under the ordinance, Tribal Council intends that the same number of acres will be farmed after water is leased. "We are farmers," Lomayesva said. "We are farmers first, and we will probably always be farmers. And we want to continue farming. But the savings from conservation efforts, we could make some of that water available."

The way for that to happen is for farming on the reservation to become more efficient – and that means applying less water to the fields. It could happen through conservation. But what tribal leaders like Lomayesva really want is a better irrigation system.

"Water could be made available for conservation or off-reservation leasing, exchange or storage in accordance with the requirements of the federal legislation and agreements if deferred maintenance was addressed along with improvements to the irrigation project," according to a statement from the tribal government.

How much water might be available? In 2018, CRIT participated in a Bureau of Reclamation study to assess current and future tribal water use in the Colorado River basin. CRIT told Reclamation to assume that up to 150,000 acre-feet per year might be leased and moved off the reservation by 2060. CRIT used the same figure in a December 7, 2020, [public meeting](#) discussing the proposed legislation to authorize leasing. However, at the end of July the tribal government said in a statement, "No decisions have been made on a baseline amount of water to be available for leasing."

What about the length of the leases? Many leases signed as part of a settlement extend for 99 or 100 years. CRIT's authorizing legislation caps leases or exchange agreements at 100 years. But otherwise CRIT will be a free agent, able to negotiate its terms. Several water policy experts in Arizona interviewed for this story said they heard CRIT was considering a lease length of 25 years. The tribes, however, said in a statement that they have not decided any lease parameters.



Farming is a cultural legacy and economic driver for the Colorado River Indian Tribes. Photo © Brett Walton/Circle of Blue

The length is significant because of state water supply rules for municipalities. The Arizona Department of Water Resources requires proof of a 100-year supply. A shorter lease would not fully satisfy that requirement, but the water could be used in other ways, said Kathryn Sorensen, the former director of the Phoenix water department. It could be stored underground to offset groundwater pumping, or be paired with other water to fulfill the state's 100-year directive. In the end, it will be a cost-benefit analysis for cities whether to lease CRIT water with a shorter term, she said.

“Each provider is going to have to weigh the length of the lease versus the priority and weigh the value,” said Sorensen, who is now with the Kyl Center for Water Policy at Arizona State University. “But, look, it’s the highest priority Colorado River water in the state. So it’s bound to be very valuable, even with a short [lease] term.”

Autonomy and Flexibility

Though it has liquid riches, this form of tribal wealth has been stuck in place. Tribes elsewhere in Arizona determined their rights to the Colorado, Gila, Salt, Verde and other rivers through negotiated settlements.

In these agreements, tribes generally ceded a portion of their historical rights in exchange for state and federal funding to build the infrastructure that would deliver water to their lands. A settlement currently before Congress – the Northeastern Arizona Indian Water Rights Settlement – is the largest yet, a \$5 billion proposal to determine water rights and build water supply and energy generation systems for the Navajo Nation, Hopi Tribe, and San Juan Southern Paiute.

Those settlements typically include leasing provisions. Twenty-four tribes in the West and eight in Arizona currently have leasing authority. The Fort McDowell Indian Community's settlement, approved by Congress in 1990, for instance, sends 4,300 acre-feet a year to Phoenix. The lease extends for 99 years. Other central Arizona cities, including Gilbert, Glendale, Mesa, and Scottsdale, lease Colorado River water from the tribes, as do mining companies and a housing developer.

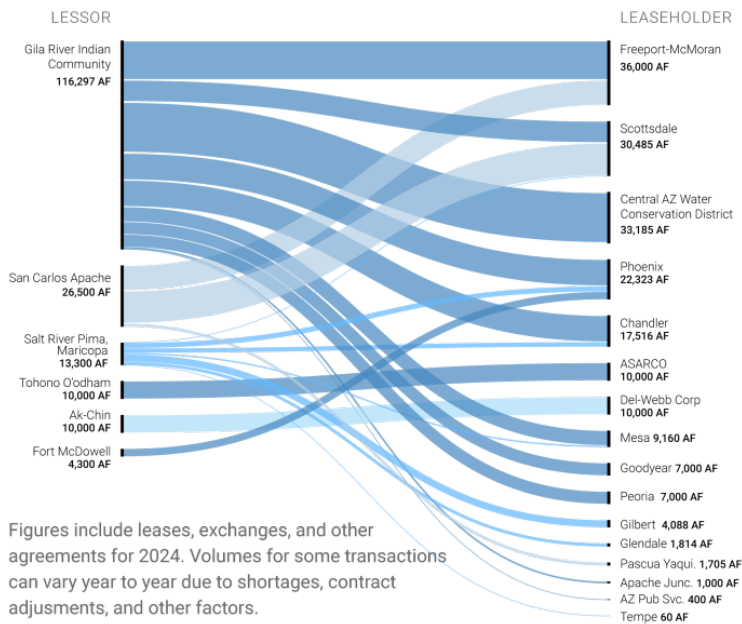
After decades, Colorado River Indian Tribes may be able to profit from water rights wealth

The Colorado River Indian Tribes (CRIT) reservation is home to four tribes on 278,000 acres spanning Arizona and California. CRIT's senior water rights entitle it to divert a whopping share of Colorado River water – more than twice Nevada's allocation. An act of Congress signed in 2023 opened the door to CRIT leasing that water for use elsewhere in Arizona. The water would likely be distributed through the Central Arizona Project, a canal completed in the 1990s.



Active water transactions from Indian tribes in Arizona

WATER LEASES IN ACRE-FEET (AF)



Figures include leases, exchanges, and other agreements for 2024. Volumes for some transactions can vary year to year due to shortages, contract adjustments, and other factors.

Sources: Tribal governments; Kyl Center for Water Policy, Arizona State University; ESRI Earth Imagery; Natural Earth Data; US Census Bureau;

GEOFF MCGHEE/THE WATER DESK

CRIT, however, is an entirely different case study. The tribes did not receive their water through a settlement. Their rights were part of the U.S. Supreme Court decree in 1964 that resolved a Colorado River quarrel between Arizona and California and set water allocations in the lower basin. The decree granted CRIT a significant volume of Colorado River water but it did not confer the right to lease. Instead, CRIT had to seek the blessings of Congress to gain leasing authority.

CRIT is now celebrating that authority. In April, three weeks before the state and federal agreements were signed, the tribes held a Water Rights Day, a community festival “honoring our continued commitment to the living river.”

This story was produced by Circle of Blue, in partnership with The Water Desk at the University of Colorado Boulder’s Center for Environmental Journalism.

[Brett Walton](#)

Brett writes about agriculture, energy, infrastructure, and the politics and economics of water in the United States. He also writes the [Federal Water Tap](#), Circle of Blue’s weekly digest of U.S. government water news. He is the winner of two Society of Environmental Journalists reporting awards, one of the top honors in American environmental journalism: [first place for explanatory reporting for a series on septic system pollution in the United States](#)(2016) and third place for beat reporting in a small market (2014). He received the Sierra Club’s Distinguished Service Award in 2018. Brett lives in Seattle, where he hikes the mountains and bakes pies. [Contact Brett Walton](#)

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January 20, 2022 In "Water News"

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“Near the Salton Sea, a company plans to build a data center to support artificial intelligence that would cover land the size of 15 football fields and require power that could support 425,000 homes. In Santa Clara — the heart of Silicon Valley — electric rates are rising as the municipal utility spends heavily on transmission lines and other infrastructure to accommodate the voracious power demand from more than 50 data centers, which now consume 60% of the city’s electricity. And earlier this year, Pacific Gas & Electric told investors that its customers have proposed more than two dozen data centers, requiring 3.5 gigawatts of power — the output of three new nuclear reactors. While the benefits and risks of AI continue to be debated, one thing is clear: The technology is rapacious for power. ... the specialized chips required for generative AI use far more electricity — and water — than those that support the typical internet search because they are designed to read through vast amounts of data. ... ” Read the full article at the LA Times

No salmon at Salmon Festival for the second consecutive year

“For the second year in a row, the Yurok Tribe’s Salmon Festival will not have any salmon, with the tribe citing below-average spawns in the Klamath River. The 60th annual Salmon Festival on Aug. 17 is coming in the wake of the dismantling of the four Klamath dams, a multi-agency effort to restore the river’s ecological health, which for decades suffered from warm water flows that promoted unhealthy ecosystems. In a release, the tribe lauded dam removal and noted that this year’s fish forecast is slightly healthier than the previous year, but not enough to justify fishing enough salmon to feed the festival. “Through dam removal and restoration, the Yurok Tribe is confident that the Klamath’s salmon runs will recover. Right now, there is more positive momentum on the Klamath than ever before. Large-scale river restoration work is happening in lower, middle and upper Klamath. More habitat rehabilitation projects are planned for next year too,” the release said. ... ” [Read more from the Eureka Times-Standard.](#) | [Salmon Festival information from Yurok Tribe](#)

Air Force Dodges PFAS Water Cleanup in Arizona, Citing Supreme Court Chevron Ruling

"The floodgate begins to open," said one observer. "The U.S. Air Force refuses to clean up their toxic chemical contamination citing the termination of the Chevron doctrine by the corrupt Supreme Court. <https://www.commondreams.org/news/air-force-epa-pfa>

In other news, starting Sept. 1, young riders [can hop on Caltrain for just \\$1 one-way](#) or \$2 for an all-zone day pass. The Caltrain Board of Directors last week approved the new fare structure to make travel more affordable for riders 18 and younger.

Hawaii bans deep-sea mining in the state’s territorial Pacific

[waters.mhttps://www.wsj.com/articles/hawaii-bans-deep-sea-mining-as-u-s-political-support-splits-on-party-lines-2842ce05](https://www.wsj.com/articles/hawaii-bans-deep-sea-mining-as-u-s-political-support-splits-on-party-lines-2842ce05)

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<https://www.democracydocket.com/news-alerts/federal-court-strikes-down-provisions-of-arizona-voter-suppression-laws/>

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The state seeks to reverse a decision that favors youth plaintiffs
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Colorado water rights: A complex system and pricey process

“Colorado water rights are a complex subject. How it’s sold and what happens to it thereafter can be as dizzying a process to understand as it is to trace. All water in Colorado is public in that it must be used for a beneficial purpose. Speculation is against the law, which is to say you can’t look to develop new water without first having an intended use for it. You can buy and sell existing water rights, even those you don’t actually own as yet. And who owns the water can mean everything, especially in a state where the high-plains desert accounts for a large percentage of water consumption. ... ” [Read more from the Denver Gazette.](#)

The American Folklife Center at the Library of Congress partners with StoryCorps to document diverse and holistic first-hand accounts of living through the COVID-19 pandemic. ·

We're Building an Audio Archive of American Experiences with COVID-19

Every person in the United States has been impacted, and many are still affected, by the COVID-19 pandemic.

The [American Folklife Center at the Library of Congress](#) is partnering with StoryCorps to tell a more diverse and holistic story of the pandemic as told by the people who lived through it.

You're invited to take part! The Center invites everyone to share their experiences, especially frontline workers, medical professionals, and emergency service workers.

This initiative is part of the COVID-19 American History Project, a Congressionally funded program to collect, preserve, and make available an archive of American COVID-19 stories. To learn more about the Project, [click here](#).

<https://storycorps.org/covid-19-american-history-project/?loclr=blogflt&>

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*This is just an interesting story on several levels, the primary being that many townships/reservations in the country face “clean up” of military installations (or other former pollutant sites) that were adjacent to their jurisdictions. sdc*

**Veggie Oil, Lactose Key to Toxic Groundwater Cleanup at Alameda Point**

<https://alamedapost.com/news/veggie-oil-lactose-key-to-toxic-groundwater-cleanup-at-alameda-point/>

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Expect Las Vegas water shortage to remain in effect as Lake Mead projections come out

“Water shortage levels for Southern Nevada are not expected to change when the federal government makes its anticipated once-a-year announcement this week. The decision is made each year in mid-August, based on projections for Lake Mead’s level in the coming year. Lake Mead is the nation’s largest reservoir. It’s currently only a third full. But for Las Vegas, that’s only half the story. Conservation measures and water recycling have allowed Las Vegas to reduce water use while the city has added residents. The Southern Nevada Water Association (SNWA) continues to promote conservation to reduce outdoor water use. So far this year, Nevada has recycled about 150,000 acre-feet of water, returning treated wastewater to Lake Mead via the Las Vegas Wash. An acre-foot is 325,851 gallons — literally, the amount needed to cover an acre with a foot of water. That’s enough to supply two to three households for a year. ... ” [Read more from Channel 8](#).

“If you always put a limit on everything you do, physical or anything else, it will spread into your work and into your life. There are no limits. There are only plateaus, and you must not stay there, you must go beyond them.” – [Bruce Lee](#)