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As the River Runs Dry: An ongoing battle between urban and rural water users

Ranchers like Tom and Dean Baker are fighting to retain water rights on the Utah-Nevada border

Brandon Loomis and
Mark Henle, The Republic | azcentral.com

BAKER, Nev. – Black sand gurgled like a mud volcano from the bottom of Clay Springs, pushed aside by crystalline water rising to the desert's surface.

Rancher Tom Baker stood in the marshy pasture beside one of the few oases that have kept his family ranching cattle across the Utah-Nevada line just downhill from Great Basin National Park. Cows romped and chewed in the green island surrounded by a sea of brittle brown greasewood.

Baker shook his head in disgust.

"To think you're going to take all the water out of the ground (to build) a few more blocks in Las Vegas," he said, practically spitting out his words.

The urban Southwest has a water problem, and residents of this barely populated valley fear they'll be among the first casualties.

Twenty-six years ago, the Southern Nevada Water Authority filed water-rights claims for much of the groundwater here and in several adjacent Nevada valleys, anticipating a building boom that couldn't be sustained on Colorado River water alone.

The urban water provider hoped to pump the groundwater a few hundred miles south to Las Vegas, through an underground pipeline. It would stretch more than 300 miles and could supply a few hundred thousand homes.

Now the river has proven itself unreliable, and the pressure for that pipeline is on. But it's just one of several multibillion-dollar water projects that the Colorado Basin states are scurrying to tap before someone else uses their fair share.

Utah is planning a pipeline from Lake Powell — a Colorado River reservoir that's already half-emptied by drought and overuse — to its fast-growing Mojave Desert city of St. George.

A new state water plan in Colorado envisions pumping more river water across the Rockies to Denver, though perhaps only in big, wet snow years.

Wyoming's governor proposes new Green River dams to hang onto his state's share of the Colorado's largest tributary.

These projects would not necessarily have an immediate effect on downstream users in Arizona, Nevada and California, because the upper basin would still have a legal requirement to deliver the same amount of water from Lake Powell.

But each straw stuck in the river ratchets up the consequences for conflict in future droughts.

If all of those who would take more from the river succeed, there will be less to go around for fish, wildlife, float trips, hydropower, and even for those who are building the pipes.

"We have to quit taking more water out," said Doug Kenney, a University of Colorado law professor who chairs the Colorado River Research Group.

Kyle Elmer (left) and Clay Baker cross U.S. 6/U.S. 50 on the Utah-Nevada border while moving 130 head of cattle from Hoover Place north to the Flats on Baker Ranch near Baker, Nev. The Bakers are fighting Las Vegas over water rights.

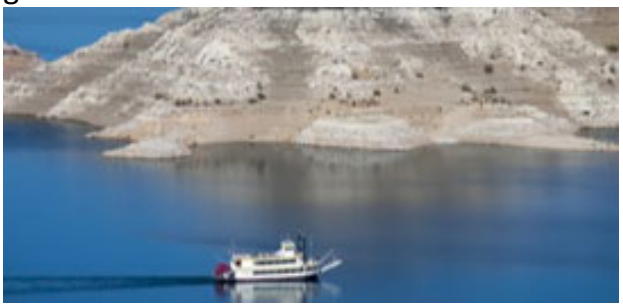
(Photo: Mark Henle/The Republic)

Hedging their bets

The seven states that use the river, along with Mexico, already have taken so much that the Colorado almost never flows to the sea. Their thirst has effectively killed a once-rich estuary, endangered native fish in the Grand Canyon, and perhaps put at risk the farmers who have made the dry Southwest an unlikely cornucopia for America's dinner tables.

"We're not just talking about a plumbing system here," Kenney said. "We're talking about a river."

Spending billions of dollars to tap an already overextended river just ensures future conflict, he said. It means urban users will go to any extent — perhaps even invoking condemnation powers to get farm water — instead of collaborating for everyone's good.



More on the water crisis

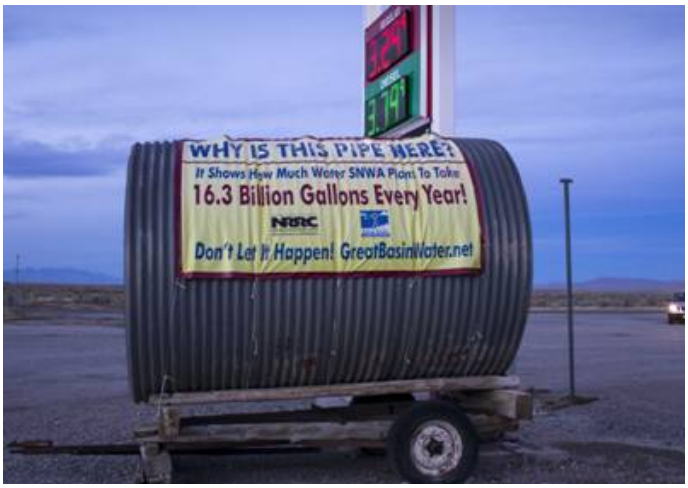
"Once you build these billion-dollar projects," he said, "you'll do whatever you have to, to put water in them."

Unlike the others, Nevada's pipe plan actually is meant to supplement the river, as a hedge against climate change. Rather than chasing more Colorado River water, Las Vegas is proving how sketchy are the prospects of a future staked solely on its flow.
"When you're a community that has 90 percent of your resource in one basket, and that basket has proven highly volatile over the last 14-15 years, hydrological diversity is important," said Southern Nevada Water Authority General Manager John Entsminger.
Las Vegas was lightly populated when the states split up the river's flow last century. As a result, Nevada got only 300,000 acre-feet, nearly all of which Las Vegas and its suburbs are already using. Of the Southwest's metropolises, it is most dependent on the river.
In recent years, though, snow in the Rocky Mountains has dried up — both through drought years and through early spring melts.
Increasingly snow transforms directly from solid to gas, without ever flowing downhill to the river, Entsminger said. Warmth causes vaporization of some of the snow without any transformation into flowing water, a process called sublimation.
"The snow-to-water cycle is the canary in the coal mine," Entsminger said, and it's looking like the warming climate is no friend of snowpack. "That's had a very detrimental impact for the water supply for the entire basin."

Residents of Baker, Nev., discuss their fears about Las Vegas taking their water. Mark Henle/The Republic

It has been especially detrimental for Las Vegas, whose supply pipe in Lake Mead faces the likelihood of running dry soon.
The pipe's intake is 1,000 feet above sea level, which is roughly 80 feet below where the reservoir's level has hovered this year. But its pumps won't work if the lake falls another 30 feet — and the water already has dropped 100 feet during the current drought.
So this year SNWA is completing construction on an $817 million pipe, bored through bedrock, that goes deeper in the reservoir. It's a cost borne by local sales-tax payers with the help of funds from the sale of federal lands in the area.
"We need to act as if what we're seeing now is the new normal," water authority spokesman Bronson Mack. "We need to adapt."
Mack stood on a ridge — formerly a peninsula marina northwest of Hoover Dam — and

marveled at how far the water had receded since he first stood there late in the 20th century.
"It's mind-blowing that this is all dirt and creosote bush," he said, "where we used to fish."



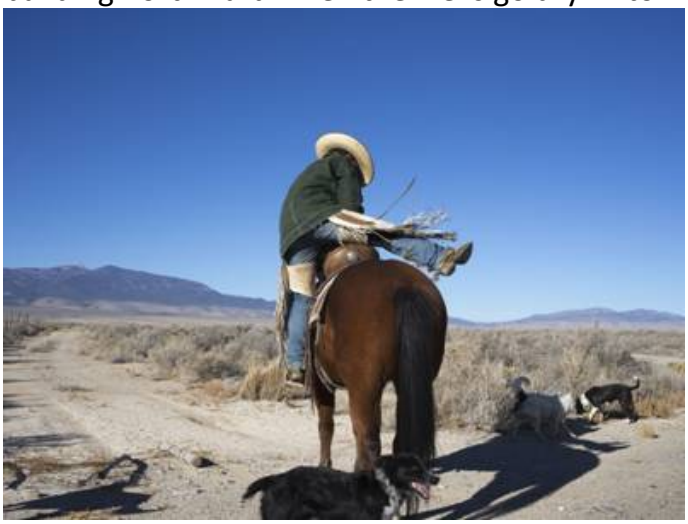
Residents of Baker, Nev., are protesting a pipeline that would transport water from under their land to the Las Vegas area.

(Photo: Mark Henle/The Republic)

More demand than supply

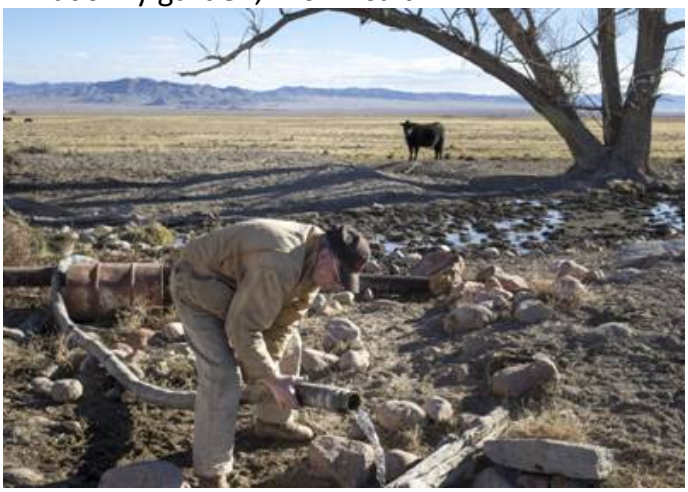
Scarcity drives the quest for a new supply from the north, where the groundwater claims are tied up in court.
Ranchers in the valleys to the south and west of Snake Valley, which straddles the Utah-Nevada border, sold out years ago, ceding their rights to metro Las Vegas.
Opponents have so far stalled in court by arguing that what falls as snow on the mountains isn't enough to replace what the pipeline would carry away.
That is a point of scientific dispute, but the Bakers don't believe there's any doubt in their valley.
"We know the water isn't here," said Dean Baker, Tom's father and the one who refused to sell when SNWA came calling. "I've spent my whole life trying to (drill) wells."
The family owns more than 10,000 acres, but irrigates only half for lack of water.
Now 75 and slipping into Alzheimer's disease, Dean Baker usually leaves the fight to his son. But his mind is still focused on the battle he has waged for decades to protect his valley and the little Nevada town that bears his family's name.
"All of southern Nevada thought I was crazy that I wouldn't take the money out of it" by selling the ranch to the water authority, Dean Baker said.
But he believes it's the urban developers who are crazy if they think they can solve their water shortage here.
The Bakers' history of drilling has found precious little beyond what the family already uses. Because Las Vegas has dibs on any new groundwater development, the Bakers

already had to grant a portion of their rights to a creek so the town of Baker could have reliable water.
The military found water deep under the valley decades ago, when it was considering basing MX missiles in the area. But the Bakers contend that water, a remnant of an ancient sea, is salty.
Build the 300-mile pipeline here, Dean Baker warned, and you'll have to keeping building northward when the wells go dry — to find more groundwater in other valleys.



Randy Elmer mounts his horse before moving 130 head of cattle from Hoover Place north to the Flats on Baker Ranch near Baker, Nev.
(Photo: Mark Henle/The Republic)
"It would be a disaster for them," he said. "It would hurt the whole state."
Later, standing out by springs that U.S. Bureau of Land Management scientists predict would at least slow if Las Vegas gets its water, Tom Baker, 45, said the family feels it is fighting for the local environment, and not just its livelihood.
With the croaks of sandhill cranes echoing across the valley, he said the springs provide water, grass and insects to migrating birds that otherwise wouldn't see water for hundreds of miles.
He added that drawing down the groundwater threatens to kill the greasewood that holds soil in place across the valley. That's part of the reason the local governments as far away as Salt Lake City have protested, fearing dust storms.
SNWA argues that a new succession of plants would anchor soils, using only the occasional rainwater. But Baker said that's a guess.
"Imagine all of this as dust," he said, his eyes sweeping across a horizon of black mountains and olive-studded flats.
This vision of destruction, reminiscent of what happened to California's Owens Valley after Los Angeles sucked it dry, is too apocalyptic, said Entsminger, the SNWA manager.
During nearly two months of hearings, Nevada's state water engineer relied on scientists when he determined Las Vegas could take 84,000 acre-feet without drawing down the aquifer.

"We're not moving any water that anyone has used historically," he said.
But Entsminger argued it would be put to good use on the Las Vegas Strip, which drives Nevada's economy.
That kind of talk burns Baker residents.
"That's theft," said Bill Ilchik. A snuff-chewing bobcat- and coyote-fur trapper who grew up in Las Vegas, he moved to Baker in the 1960s to get away from the big city — even though only 115,000 lived in the city.
Vegas, Los Angeles and Phoenix all "take the loot and run," stretching beyond their means at the rural West's expense, he said.
"If they take our water," he said, "there's no kind of opportunity for any development up here."
Outside his trailer home is a big sagebrush, which he waters occasionally.
"That's my garden," Ilchik said.



Dean Baker drains a water line at Baker Ranch, near Baker, Nev., to keep it from freezing.

(Photo: Mark Henle/The Republic)

More effort needed

The Southwest's future depends on cooperation, said Jennifer McCloskey, deputy director for the U.S. Bureau of Reclamation's Lower Colorado River Region. Recent conservation and sharing agreements among the states, and with Mexico, are a good start, she said.
But the states will have to do more to wring enough water from the river to support the tens of millions of people that the region is expected to add by midcentury.
"Everybody has to work together on making smart decisions for our water supply," she said.
A Bureau of Reclamation desalination plant near Yuma is a good example of how much effort it will take to get each drop of new water, McCloskey said.
Built to test filtration of salt out of used irrigation water, it produced 33,000 acre-feet of

water. That compares with roughly 3 million acre-feet that the bureau predicts the region's needs will outstrip the river's supply by 2060.
The plant is now idle and would cost $30 million to restart.
"That's how hard it is to get water," McCloskey said. "There are no millions of acre-feet to be had."
No amount of pipe will change that.