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More users and less water are stressing the Colorado River — with serious consequences for Vegas

by **LAUNCE RAKE**

The Colorado River is one of the most heavily plumbed and litigated river systems in the world. It is a critical reservoir for tens of millions of agricultural and municipal users from Wyoming to the Mexican border. And it is under siege, hit hard by falling supply and increasing demand.

In the crosshairs of those intersecting trends is Las Vegas, where 2 million residents get almost all of their water from the Colorado.

The evidence that our water supply is in trouble is obvious even to those flying over Lake Mead, into which we dip the “straws” bringing water to the city. A white ring of mineral deposits indicates the high-water mark. Now Lake Mead and its upper-basin twin, Lake Powell, are about half-full, and the levels of this critical supply are expected to continue to fall, especially in light of last year’s disastrously low precipitation levels in the Rocky Mountains.

The Southern Nevada Water Authority is constructing an \$800 million “third straw” to deal with falling levels in Lake Mead, and ratepayers were shocked by a water-rate increase last summer. The agency has proposed even more expensive backups, such as a pipeline to drain water from rural Nevada and Utah or diverting Mississippi River floodwaters.

SNWA has promised that its board of directors, made up of three Clark County commissioners and one representative each from the county’s four largest cities, will take a final vote to go ahead with construction of the rural water wells and pipeline when Lake Mead hits an elevation of 1,075 feet above sea level. That will not make the federal and state legal challenges from the opposition disappear, but even if the pipeline, with an estimated cost of \$15.8 billion (including \$8 billion in financing charges), is ever built, the Nevada water engineer has approved plans to withdraw only 84,000 acre-feet per year (AFY) from rural valleys, enough for perhaps 150,000 homes at existing consumption levels, although SNWA hopes to multiply that total by returning treated effluent to Lake Mead and expanding the pumping over time.

Today, the elevation of Lake Mead is about 1,116 feet, down 100 feet from 1998.

The fundamental reality that SNWA and every user must deal with is that there is more demand for water than there is supply going into the river. Climate change is exacerbating the problem, as less precipitation falls annually in the river basin, and what does come arrives increasingly as rain, which isn't as efficient as snow in filling the river. Most years, the river no longer reaches its natural estuary at the Gulf of California. It simply dries up in what once was one of the most vital wetlands in North America, the Colorado Delta in Mexico.

On top of the fundamental imbalance of supply and demand, states and users are competing to claim every drop in the river system. Proposals to mine oil shale and tar sands for fossil fuels in the upper basin could extract hundreds of thousands of acre-feet annually; Utah wants to build a pipeline from Lake Powell to the southwest part of the state that would take another 100,000 AFY; and a new nuclear power plant, also proposed for Utah, would take out another 53,000 AFY.

"Wyoming says if they don't use the water, then Colorado will take it," says Gary Wockner, director of the Save the Colorado foundation, based in Fort Collins, Colo. "Colorado says if we don't take the water, then Utah is going to take the water. And all the upper basin states say if they don't take the water, then California is going to take it. Everybody at this point is trying to get the last legally allowed drop of water out of the river."

The seven states of the Colorado River basin — Wyoming, Colorado, Utah and New Mexico in the upper basin, and Arizona, California and Nevada in the lower — plus Mexico are expected to share an annual appropriation of 16.5 million AFY. Nevada has the smallest allocation under the 1922 Colorado River Compact, just 300,000 AFY, less than 2 percent of the total, and all of it going to Clark County. California uses 4.4 million AFY — 14 times as much as Nevada takes — to support both municipal and huge agricultural water needs.

Into this Balkanized picture of water use, in which states have a vested interest not just in using the water but in wringing every legal drop out of the system, some have called for a revisit of the compact and the Law of the River that has developed over the last 90 years. However, insiders say it would be almost impossible to wipe the slate of water rules clean.

Nonetheless, the Bureau of Reclamation, which by law is the river master, is making an effort to at least understand what is happening to the supply and demand from the river from a larger, systemic perspective, not just from the view of one state, industry or user.

Several years in the making, the bureau's bureaucratically titled Colorado River Basin Water Supply and Demand Study: Development and Evaluation of Opportunities for Balancing Water Supply and Demand is expected to drop later this month or in early December.

The bureau says the study will consider "a broad range of options to help resolve future water supply and demand imbalances in the Colorado River," imbalances that could equal 3.5 million AFY or more, over the next 50 years. To put it in perspective: The excess demand could easily equal the water needs of more than 10 Las Vegas-sized water consumers.

Something's got to give. Some believe the easiest, cheapest and fastest way to relieve pressure on the system is to cut personal use. Conservationists hope their efforts to encourage reductions in municipal use will get a boost from the basin study. Organizations such as Save

the Colorado, Western Resource Advocates and the 90 by 20 Campaign have urged conservation.

“We need to make sure the basin study focuses on water conservation and includes metrics for what a healthy flow in the river would be, and proposes steps to get there,” Wockner says.

Kami Dempsey represented the 90 by 20 campaign in Las Vegas this year. The new campaign urged municipal users throughout the basin to work towards a goal of daily water use of 90 gallons per day — a significant reduction in Las Vegas, where people use on average about 125 gallons per day.

The effort wasn’t welcomed by the SNWA, which argued that a one-size-fits all conservation goal wasn’t realistic. Dempsey, though, says she believes the effort helped direct people’s attention to their water bills and encouraged conservation.

“The status quo, even if it’s working now, is not going to work for long,” says Becky Long, a “water advocate” for Conservation Colorado, one of the groups working in the 90 by 20 coalition. “We’ve got to make some changes, and that is tough. Change is hard.”

The 90 by 20 organizers estimate that achieving their goal for municipal consumers would save about 1 million AFY, more than three times what Vegas takes from the river.

Wockner, who visited Las Vegas in October to screen the Robert Redford-produced movie *Watershed* at the Springs Preserve, says these efforts to look at the Colorado River systemically are critical. The river is now very, very sick, and people need to realize that the death of the river system has huge implications for tens of millions of people — including every resident, visitor and business in Las Vegas.

“The two biggest threats are climate change and the continual increase in demand for water due to population growth,” he says. “None of the models are predicting that Lake Mead will fill again, and it’s a little more than half full now.”

But Wockner and others are, despite the clear threat to the river, optimistic that, somehow, compromises can be reached, conservation can be implemented and the river can be saved. Mexico and the United States are close to reaching agreements that could eventually bring wetlands back in the Delta while preserving access to water for municipal users and agriculture. The basin study itself is a huge opportunity to emphasize conservation, he says.

Long, in Denver, agreed.

“We’re all in this together,” she says. “If we run into major [Colorado River] Compact issues, we are really in trouble. We better be ready for a major change, and it’s best not to be forced to make decisions. It’s really easy to forget how precarious we are out here in the West without a major snowpack. We’ve got a shared responsibility in this.”

Launce Rake has worked with groups, including the Sierra Club, that supports water conservation. He also serves on a finance subcommittee looking at the rate structure for the SNWA and Las Vegas Valley Water District