

THE WALL STREET JOURNAL.

One River's Outsize Impact—and the Threat of Drought

The Colorado Supplies Economic Lifeline to Seven States but Its Future Is Threatened



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Jan. 14, 2015 2:50 p.m. ET

A new study for the first time quantifies the economic importance of Colorado River water to seven Western states—and the dire outcome should ongoing droughts dry up even a portion of it.

The river's water fuels \$1.4 trillion in annual economic activity in California, Arizona, Nevada, Utah, Colorado, New Mexico and Wyoming, says the research by economists at Arizona State University. With just a 10% reduction in the water available for human use the gross economic product of those states would fall by \$143 billion and cost 1.6 million jobs.

At a 20% drop, those numbers would shoot up to \$287 billion in lost economic activity and 3.2 million jobs, [according to the study](#).

The study assumes that no increase in water from other sources would be available. Those states, all of which have contractual rights to water from the Colorado, so far have managed to largely

offset reductions in river flow brought on by a 15-year drought by drawing from underground reserves and stepping up conservation, among other measures.

The researchers warn that real economic pain could occur when shortfalls no longer can be made up as population continues to grow and climate change affects rainfall.

“We are getting to the crunch now,” said Timothy James, an Arizona State economics professor who led the study. “The Colorado River is the lifeblood of the entire region.”

California’s drought, for example, has forced municipalities to draw so much more water from underground that some wells have gone dry. The state relies on the Colorado River, along with the snowpack in the Sierra Nevada, to meet much of its water needs.

The river’s troubles are well documented elsewhere. The water level at Lake Mead—the largest reservoir for the Colorado River—[has fallen more than 100 feet over the past decade](#) to an elevation of 1,089 this week, according to Bureau of Reclamation figures.

So far, the declining flows haven’t significantly affected the region’s economy, though farmers have suffered cutbacks and boating and other river-related businesses have taken a hit.

But a study completed in 2012 by the bureau and the seven Colorado River basin states concluded the river won’t be able to meet demand as the population that depend on its water rises from 40 million to nearly 80 million by 2060, under one growth scenario.

Many companies, water districts and municipalities already have responded to tightening supplies by using water more efficiently and banking some of it for future use.

AT&T Inc. has set a goal of reducing water use by 15% at 125 of its biggest-consuming buildings in the region and elsewhere by the end of this year. Measures include using more efficient equipment to run chillers for air conditioning, said John Schulz, assistant vice president of sustainability operations for the telecommunications giant.

At the Caesars Palace hotel-casino in Las Vegas, managers save 30 million gallons of water a year by using a car wash-like laundry rather than conventional washing machines to clean linens and towels, said Eric Dominguez, corporate director of facilities, engineering and sustainable operations for Caesars Entertainment Corp.

The Arizona State study was commissioned last year by Protect the Flows, a nonprofit coalition of businesses that depend on the Colorado.

Ann Tartre, director of corporate partnerships for the coalition, said estimates had been made before on the river's value to the recreation industry but not regional economies. She said the data are needed to help shape Western water policy to safeguard the river's future.

To show the broader impact of the Colorado, Dr. James and his team from the university's L. William Seidman Research Institute calculated what would happen if the entire flow of the river was cut off for one year. Among key findings: The water accounts for nearly two-thirds of the basin's gross state product and that among the hardest hit sectors in dollar terms would be real estate, finance, professional and technical services, and retail.

"It confirms what we suspected—the impact is really significant for this arid region," said Ms. Tartre, whose group is based in Gunnison, Colo.

Although much of the region's water goes to agriculture, the study didn't consider whether diverting those allocations to other businesses would cushion economic damage. But many farmers in the region have water rights that aren't easily taken away, so that possibility wouldn't necessarily be a practical one.

Users of Colorado River water said this kind of research would help reinforce efforts to use the resource more wisely.

"When they put a price tag on water like this, it helps focus the mind that this is worthy to think about," said Kevin Tilden, spokesman for California American Water, a private supplier to about 600,000 people in the Golden State.

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