

# West's Biggest Reservoir Is Back on the Rise, Thanks to Conservation, Snow

Lake Mead, near Las Vegas, reaches its highest level in six years after successful efforts to slash water use

By Jim Carlton | Photographs by Roger Kisby for The Wall Street Journal

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“Reality check!” Ryan Reaves, right wing for the Vegas Golden Knights, yells as he body-slams a man through a plate-glass window for excessive lawn watering in a television commercial. “Vegas is enforcing water waste big time.”

Ads like this began airing last year as part of a campaign by the Southern Nevada Water Authority to persuade the more than two million residents of this sprawling desert metropolis to use less water. Using a carrot-and-stick approach, including paying landowners to remove grass and fining for overuse, the agency said it has cut total Colorado River water consumption by 25% over the past two decades, even as the population it serves has grown around 50%.



**A boat rider against a Lake Mead embankment showing water lines, close to the Las Vegas Boat Harbor near Boulder City, Nev.**

The savings are crucial because Lake Mead, which is fed by the Colorado River, supplies more than 40 million people in seven states in the fast-growing Southwest and had dropped precipitously during a drought between 2000 and 2015, undermining a \$1.4 trillion economy tied to the river, according to Arizona State University estimates. Expanded conservation across the region, combined with snowier winters in the Colorado's headwaters, have reversed the decline. Since 2016, Lake Mead has risen 25 feet to 1,096 feet as of Tuesday, leaving it 44% full and at its highest level in six years.

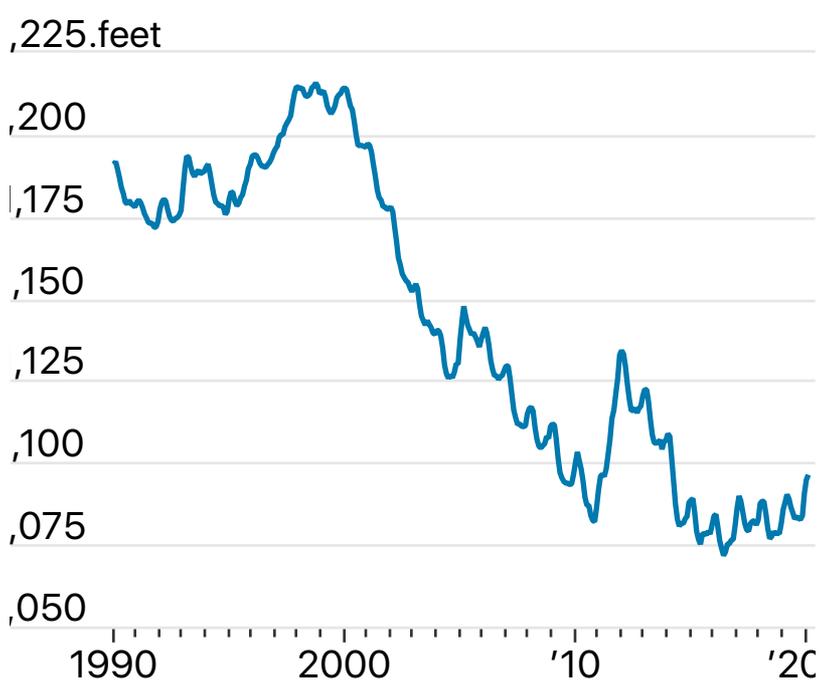
“It’s great for the lake, great for the fish and great for tourism,” Josh Gannon, a worker at the lake’s Las Vegas Boat Harbor, said on a recent afternoon.

The turnaround may not last long, though. Water managers caution that measures such as greater use of groundwater will be needed when the

## Success Story

After years of conservation work, the water level at Lake Mead along the Colorado River is rising again.

### Lake Mead water level



reservoir likely resumes its decline in the coming decades amid population growth and a warming climate that is expected to shrivel snow packs.

“This gives us a little time as we look ahead,” said Daniel Bunk, deputy chief of the Bureau of Reclamation office in Boulder City, Nev.

One reason for the plunge in use has been a massive conversion of water-sucking turf grass to drought-tolerant lawns. In 2015, the Metropolitan Water District of Southern California doled out about \$350 million in rebates for conversion of water-intensive turf grass to drought-tolerant lawns—seven times what had been budgeted.

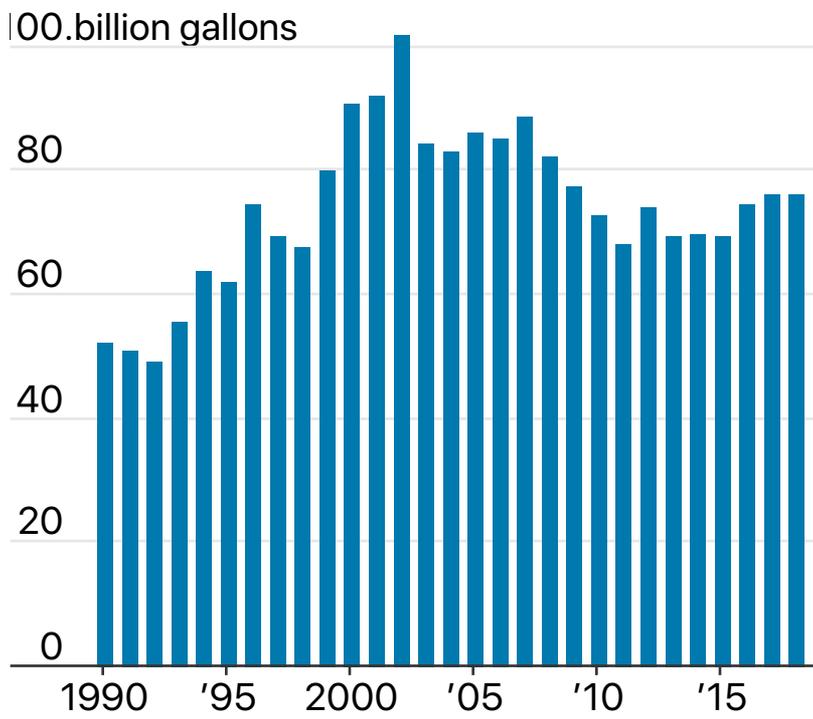
“We think a lot of this is a permanent transformation in the way people use water,” said Jeffrey Kightlinger, general manager of the big Los Angeles water wholesaler.

In Orange County, Calif., the Irvine Ranch Water District has been able to cut its per capita drinking-water use by nearly one-fifth since 2013 due to conservation programs including a water budget for each customer. If they go substantially above it, they are assessed rates in higher price tiers, and the usage is labeled on bills as “inefficient” or “wasteful.” The district previously used the term “abusive,” but changed it after complaints.

# Southern Nevada's consumption of Colorado River water

Note: Excludes offstream storage

Sources: U.S. Bureau of Reclamation (water level),  
Southern Nevada Water Authority (consumption)





**Lake Mead and the Las Vegas Boat Harbor.**

Photo: Roger Kisby for The Wall Street Journal

“There’s being firm with your customers, and then there’s insulting,” said General Manager Paul Cook.

Most of Nevada’s water is now recycled, including from sinks and showers. Much of the recycled water is returned to Lake Mead, where the Southern Nevada Water Authority has stockpiled enough water to account for about seven feet of the reservoir or more than two years of its allotted supply of 300,000 acre-feet a year.

With most water used outdoors, the agency focused on reducing consumption on the lawns and golf courses that carpet the Las Vegas Valley, which sits in a desert that receives only four inches of rain annually.



The Red Rock Country Club, where much of the grass turf, lakes and ponds have been removed, earning rebates from the Southern Nevada Water Authority in Las Vegas.

Building codes were amended to prohibit new turf in the front yards of new homes, while rebates were paid to yank out nearly 200 million square feet of grass—enough to cover 3,350 football fields.

### SHARE YOUR THOUGHTS

*What water conservation solutions do you think work best? Join the conversation below.*

At the Red Rock Country Club, crews replaced much of the turf at two 18-hole golf courses with desert landscaping—leaving grass mainly where golfers play, said Regional General Manager Thom Blinkinsop. He does regret the decision to take grass out of a driving range, though, saying the hard desert soil is causing problems like scuffed-up golf balls.

“It’s more of a negative visual than it’s worth,” Mr. Blinkinsop said.



The fountains at the Bellagio casino and resort use water drawn from a well to reduce consumption of Colorado River water.

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