

Why Las Vegas has coped well with drought so far

The western drought

Concrete oasis

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That thrifty water use in full

ON THE hot, empty road that leads from Las Vegas to the shocking beauty of Red Rock Canyon National Conservation Area sits Cactus Joe’s nursery. Cacti, yucca plants, ornamental rocks and various sorts of garden furniture sprawl over seven acres. Business is booming, says Yucca Lou, the sunburnt, cowboy-booted former engineer who took over from Cactus Joe a few years ago. “Traditionally, people in Las Vegas outfitted their homes with tropical plants, lots of foliage, all very water-intensive,” he explains. “But now people are getting rid of the grass, they’re putting in rocks and they’re buying cacti.”

Cactus Joe’s success helps to explain why Las Vegas has not—so far—been crippled by its drought, at least compared with neighbouring California. To the casual observer, with most of the West parched, Las Vegas’s water use seems astonishingly wasteful. Visitors flying in see acre on acre of suburban houses, a good proportion of them with pools. Those staying on the Strip find abundant fountains, enormous swimming pools and palm-lined boulevards, all in the middle of the desert. And yet beneath this mirage, quietly, Sin City has proven remarkably

effective at managing its water, even as its population booms. If its success is to continue, it will have to get better still.

Las Vegas sucks up a lot of water. In 2010, the latest year for which nationally comparable figures have been released by the US Geological Survey, each resident of Clark County, which covers the entire urban area of Las Vegas and its suburbs, used 234 gallons of water every day. In California, the figure was 181 gallons. But in recent years southern Nevada has dramatically cut its water use. Between 2002 and 2014 the region's consumption of Colorado river water fell by 30%, even as Clark County added half a million residents.

Unlike southern California, which has other sources (such as groundwater), Las Vegas gets almost all its water from Lake Mead, the vast reservoir that sits behind the Hoover Dam and is filled by the Colorado river. This year the water level is as low as it has been since the dam's completion in 1936. An unsightly "bathtub ring" of bleached rock reveals how much it has sunk; the dam's water-intake towers are now almost fully exposed. To get its supply, the city relies on two pipes, or "straws", which draw in water. In September, a third will open to ensure that even with the lake at a lower level, the city can continue to slake its thirst. It cost \$817m to build.

Under the law of the river—the various agreements between the states of the Colorado basin about how to divide up the water—Nevada gets 300,000 acre-feet (enough water to fill one acre to the depth of a foot) each year, about 10% of Arizona's allocation and 7% of California's. Nevada's share is low thanks to a quirk of history: in 1922, when the first Colorado River Compact was agreed to, the state had fewer than 100,000 people and was mostly empty desert. "No one ever expected that Las Vegas would be what it is today," says Buzz Thompson, an environmental law expert at Stanford Law School.

(See the illustration on the next page)



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Yet, curiously, that limited supply may help to explain why Las Vegas is coping relatively well. The hard limit on Nevada’s supply from the Colorado river gave the city an incentive to hold down its use long before it became urgent. Water-conservation policies in Las Vegas are more

advanced than in surrounding states, particularly when compared with California, where the drought this year has caused chaos and wild fires (more than 20 were burning at last count) led the governor, Jerry Brown, to declare a state of emergency.

Since 1999 the Southern Nevada Water Company has paid residents to tear up their lawns. New houses, of which Las Vegas still builds many even after a catastrophic property slump began in 2006, are banned from including front lawns. As the success of Cactus Joe's shows, most these days are designed with "desert architecture" style, surrounded by cacti, brown rocks and yucca plants. Cutting outside water use is more efficient than preventing the use of showers and the like, as water flushed down drains is treated and returned to Lake Mead.

Las Vegas's many golf courses may seem wasteful, but their water use is strictly rationed: greens remain grassy, but golfers who fail to stay on the fairways find their balls in desert rock. Much of the water the courses use is non-drinkable "brown water". They use slightly less water—7% of Las Vegas's total consumption—than casinos, which too have got more efficient. At the Bellagio, a hotel and casino with a grandiose fountain at its front, the water used comes from a well of non-drinkable water, rather than the lake. On July 25th, a massive fire broke out on the roof of the Cosmopolitan hotel—artificial plants helped to fuel the blaze.

Water use is now tightly metered on a four-tiered scale: as households use more water they are charged more per gallon. That means that people who insist on keeping their palm trees and lawns must pay hefty sums for that privilege. In California, laws prevent many municipal water suppliers from charging any more than enough to cover their costs—which means that high prices cannot be used to encourage more frugal behaviour.

All this has made it possible for Clark County to grow from around 750,000 people in 1990 to over 2m now, without running out of water. The trouble for Las Vegas is that it is a city that feeds on endless growth—eventually, the easy pickings of efficiency will run out. "They just issued a few thousand residential building permits around here", complains Yucca Lou. "Why are we doing this to ourselves?" And yet the newcomers are his customers.

[From the print edition: United States](#)

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