

Water Use in Las Vegas

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Sources of Water for Las Vegas

The Colorado River

According to the Southern Nevada Water Authority, Nevada brings in almost 90% of its water from the Colorado River (pictured below).



The river is split up into two distinct allocations: the Upper Basin and the Lower Basin. The Upper Basin provides water for Colorado, Utah, Wyoming, and New Mexico, and the Lower Basin is shared between Nevada, California, and Arizona.

When the Colorado River allocations were first being assigned in 1928, the negotiators of Nevada agreed on 300,000 acre-feet per year for Nevada's water allowance, an acre-foot of water being 325,851 gallons. This amounts to a total of over 97 billion gallons of water per year for Nevada. At the time, this was more than enough water for the comparatively small Las Vegas.

Lake Mead



Lake Mead serves as southern Nevada's primary water reservoir. Covering around 247 square miles of water, Lake Mead is the largest man-made lake in America.

Groundwater Development Project

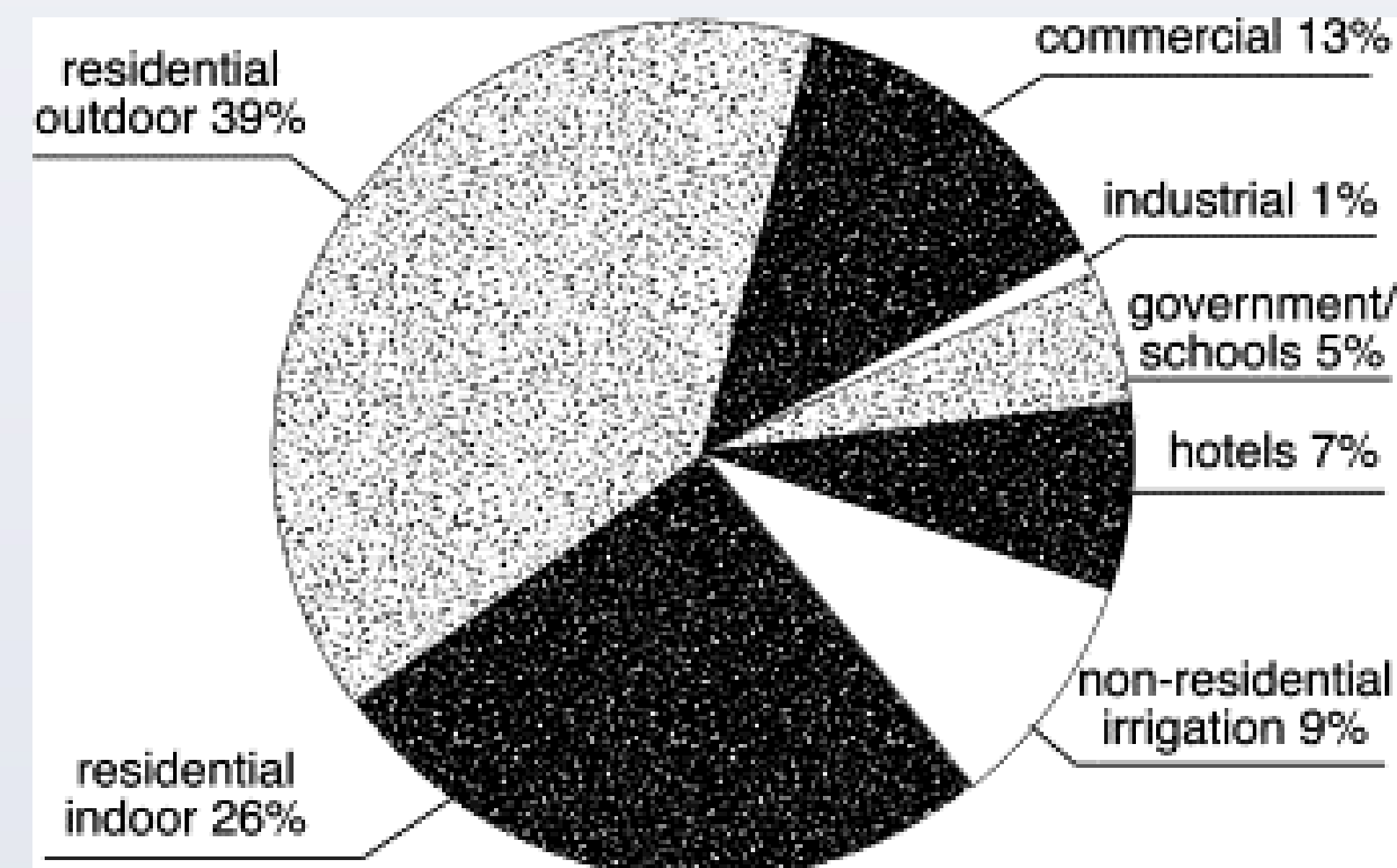
Recently, the Southern Nevada Water Authority has proposed creating a pipeline system to transport groundwater from central and eastern Nevada for the use in the more populated Southern Nevada. The project intends to reduce Southern Nevada's reliance on the Colorado River, and the outcome of the project is still pending.

How Much Water Does Las Vegas Use?

Water Use Per Capita

The average household in Southern Nevada uses about 222 gallons of water per day. This has recently dropped from using 314 gallons of water per day. The southern Nevada Water Authority hopes that by the year 2035, water use will have dropped down to 199 gallons per day for each household.

Where does the water go?



A 1997 chart showing water distribution in Southern Nevada, provided by the SNWA

The majority of Southern Nevada's water goes to residential use, both indoor and outdoor. Because of this, restrictions have been placed on certain aspects of water use such as the amount of lawn a household can own. Aside from residential use, a large amount of water is still used in other areas of communities, such as golf courses. A golf course can use up to 6.3 acre-feet of water per acre of land without penalty. That's over 2 million gallons of water for each acre per year!



Cascata golf course in Las Vegas, Nevada

Water Restrictions

Due to the increasing population of Southern Nevada, the water demands have grown immensely in the past few decades. Water restrictions have been put in place to ensure water conservation for Southern Nevada families. Currently, new homeowners are not allowed to plant lawn in the front yard of their house, and lawn areas are restricted to 50% or less of their current yard. Rebates are also offered up to \$1.50 per square foot of grass converted to a water-smart landscape.

Future Problems Concerning Water Use

Running Low on Water

Recently, Lake Mead has reached record low levels of water. This has brought concern to many people, and researchers at San Diego's Scripps Institution of Oceanography have predicted there is a 50% chance of Lake Mead running dry by 2021.



"Bathtub ring" around Lake Mead

The surface of Lake Mead dropped 100 feet between the year 2000 and 2009. There is a visible "bathtub ring" (pictured above) showing the current water level compared to the previous water level.

Alternative Water Sources

With growing demand levels for water in Southern Nevada combined with record low water levels, Southern Nevada water authorities are looking out for alternative sources of water. One option looked at is taking water from the eastern United States instead of the west. Another proposal looks at taking water from California's shore line. This would require building a desalination system for preparing the seawater for personal use. Unfortunately, both plans proposed are expensive and would call for enormous energy requirements.

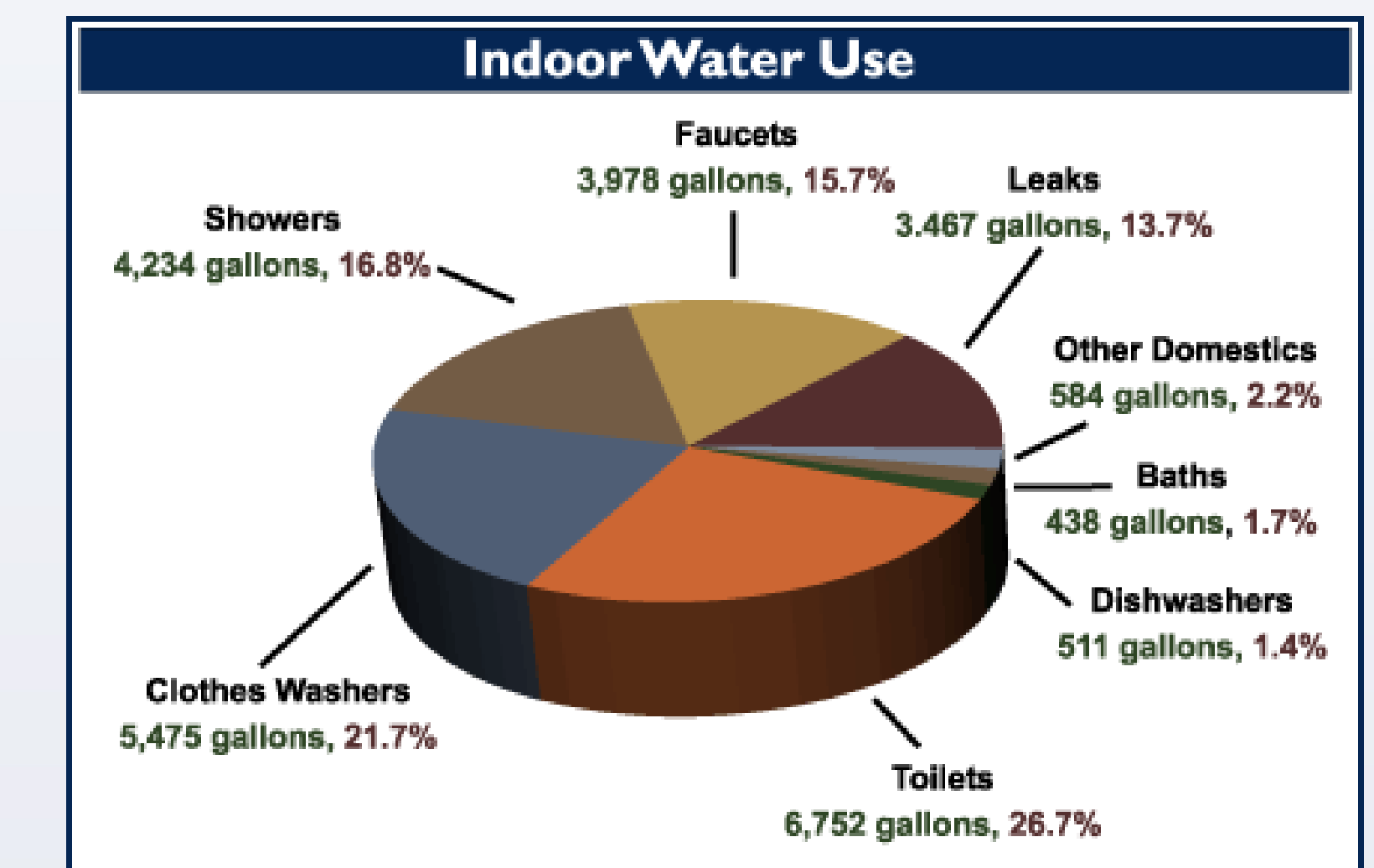


California's coastline, a proposed future source of Nevada's water

The Future

As of right now, it is impossible to know the future of Southern Nevada's water situation. With proposed alternative water sources combined with focused conservation efforts, Southern Nevada may be able to sustain its water demands longer than predicted. Factors such as weather and climate change can also greatly affect the water sources in Nevada. Only time will be able to tell the outcome of Southern Nevada's water concern.

Other Data



A 2010 chart of indoor water use in Southern Nevada, provided by the SNWA

Sources

Southern Nevada Water Authority

<http://www.snwa.com>

Las Vegas Valley Water District

<https://www.lvvald.com/>

"Lake Mead May Dry Up by 2021"

<http://news.nationalgeographic.com/news/2008/02/080213-AP-lake-mead.html>

"Lake Mead Is Drying Up"

<http://www.good.is/posts/lake-mead-is-drying-up/>

