



# Surviving Shortage

*Protecting Southern Nevada's  
Critical Water Needs*

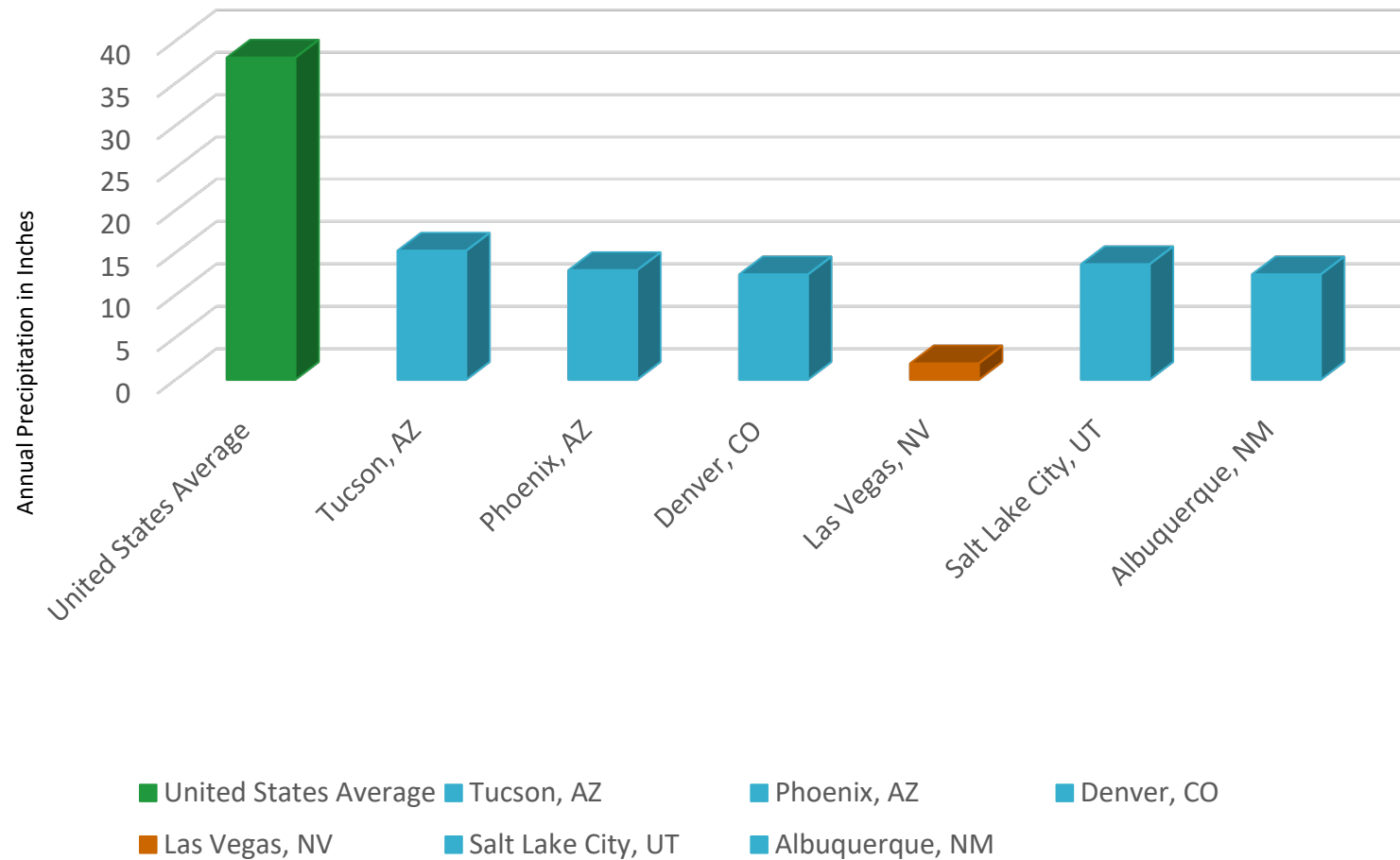


SOUTHERN NEVADA  
WATER AUTHORITY®



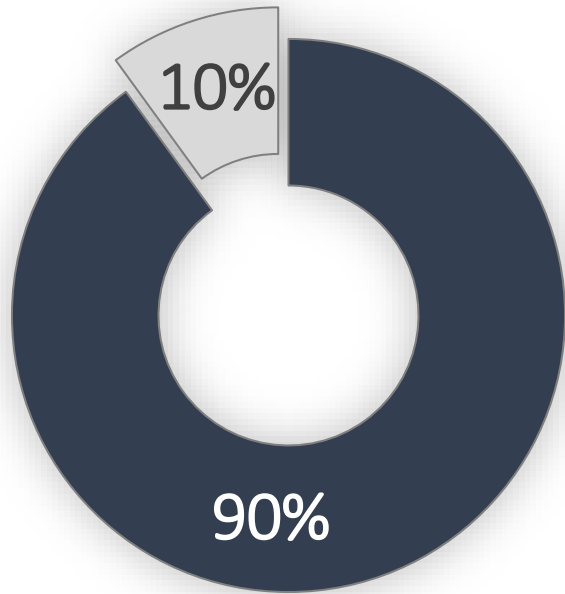
# LAS VEGAS: THE ULTIMATE DESERT COMMUNITY

Las Vegas is the driest metropolitan area in the United States.



# SOUTHERN NEVADA'S WATER RESOURCES

Southern Nevada is dependent on the Colorado River to meet our community's water needs.



■ Colorado River    ■ Groundwater



# SOUTHERN NEVADA'S WATER RESOURCES

Nevada's Colorado River allocation was set nearly a century ago and cannot realistically be increased

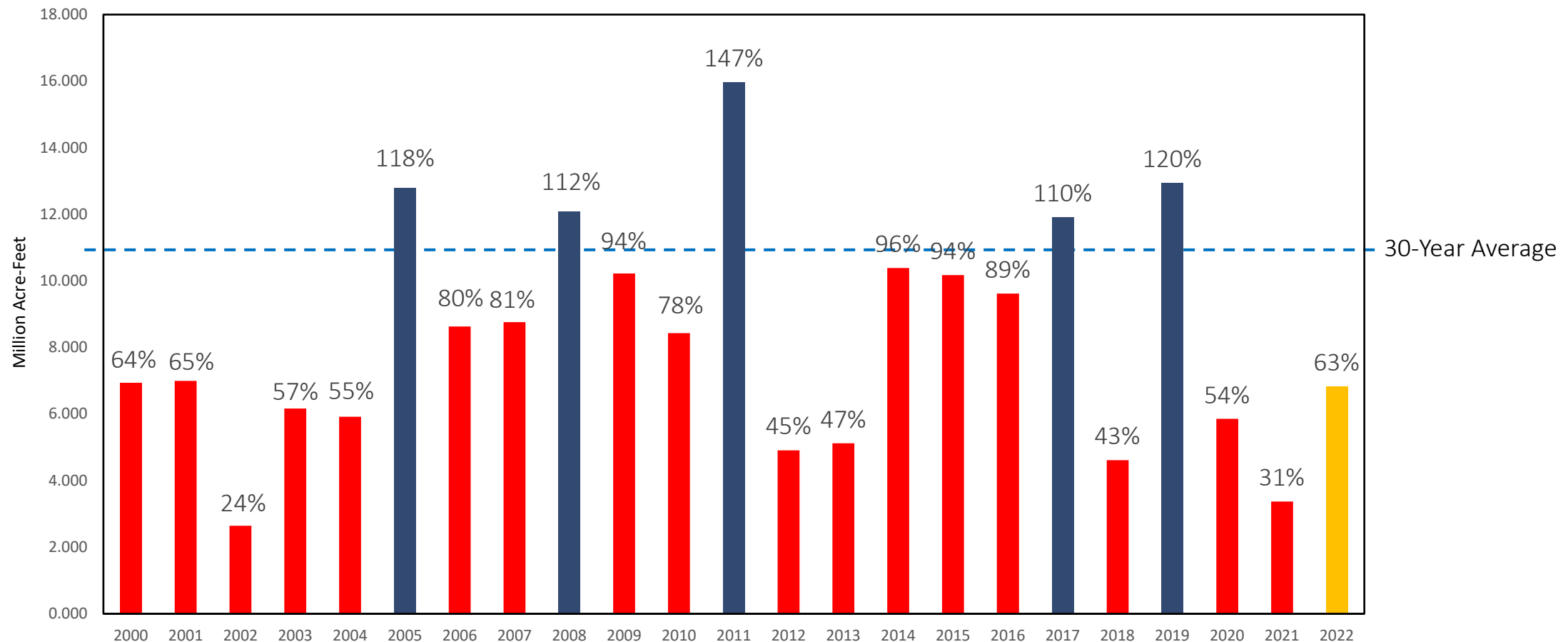




# COLORADO RIVER UPDATE

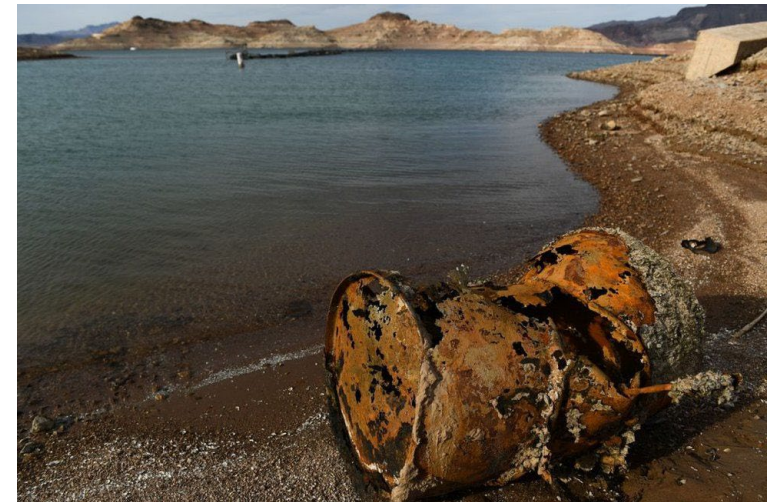
2022 is not expected to improve conditions.

The most recent analysis projects inflows to be less than two-thirds of normal.



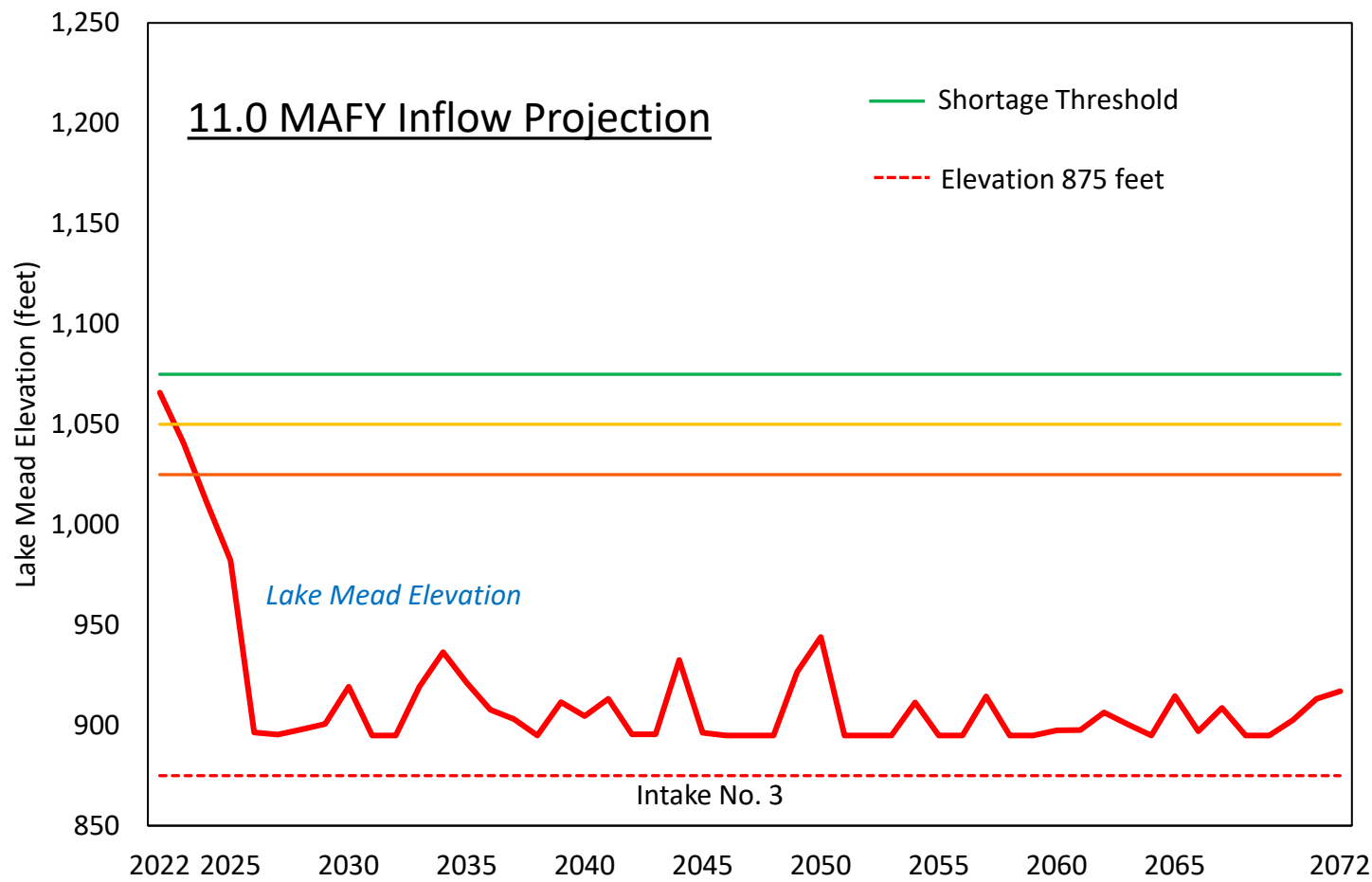
Lake Mead is at significant risk of falling below 900 feet, a condition called “deadpool.” At that elevation:

- Reservoir storage is less than 10 percent of capacity
- The SNWA’s first two intakes are above the surface
- Hoover Dam is unable to release water downstream to Arizona, California or Mexico
- Hoover Dam can no longer generate power
- **Nevada’s allocation will be further curtailed by an undefined, potentially significant quantity**



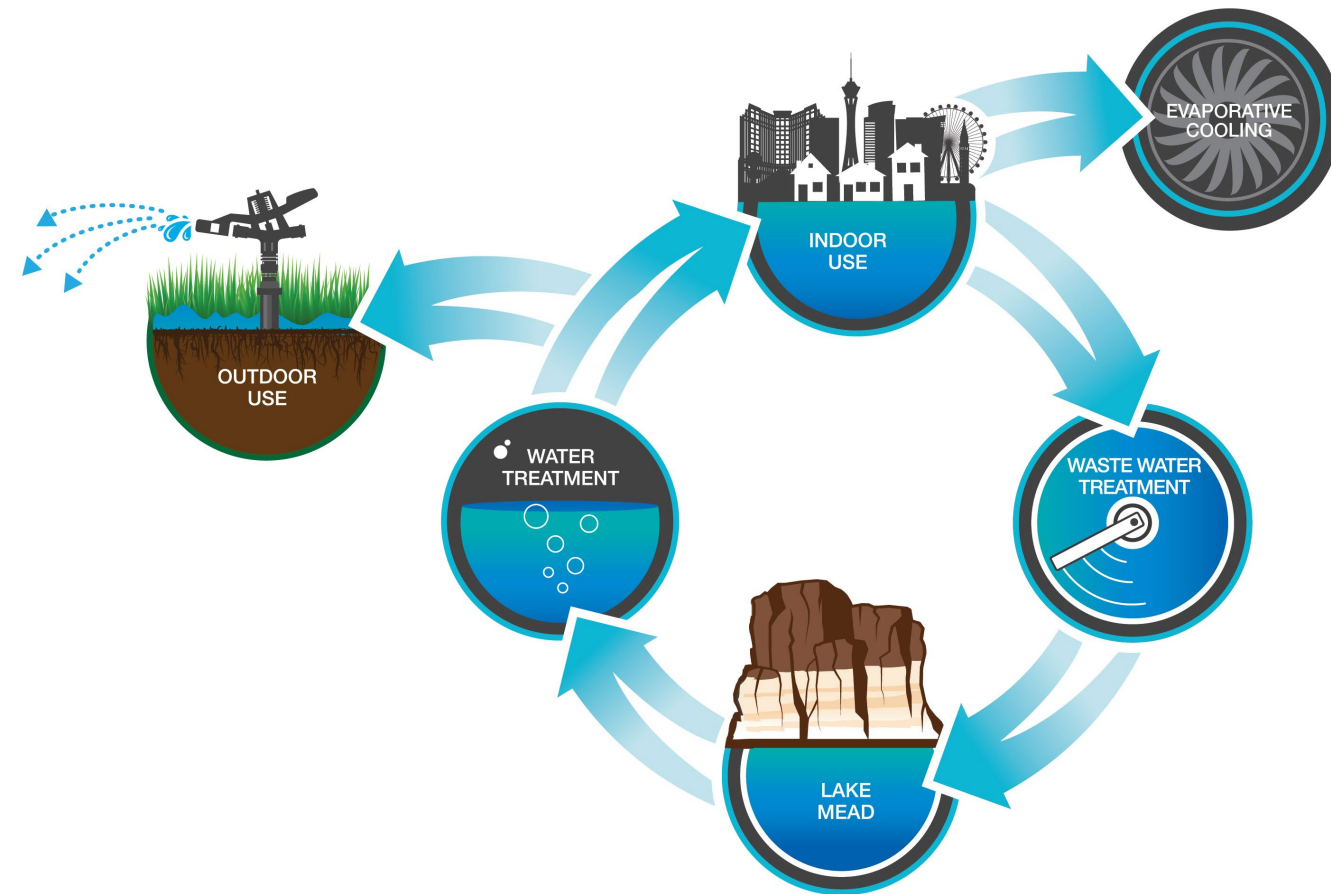
# WATER RESOURCE PLANNING

Not only are things expected to get a lot worse ...  
they will likely stay that way for our foreseeable future





However, we have advantages, one of which is that Las Vegas is the water equivalent of a perpetual motion machine ... but only for the water used indoors



**More than 99 percent of water used indoors  
*is captured and recycled.***



**Outdoor water—primarily for landscape  
irrigation and commercial-scale  
evaporative cooling—*is not recoverable***

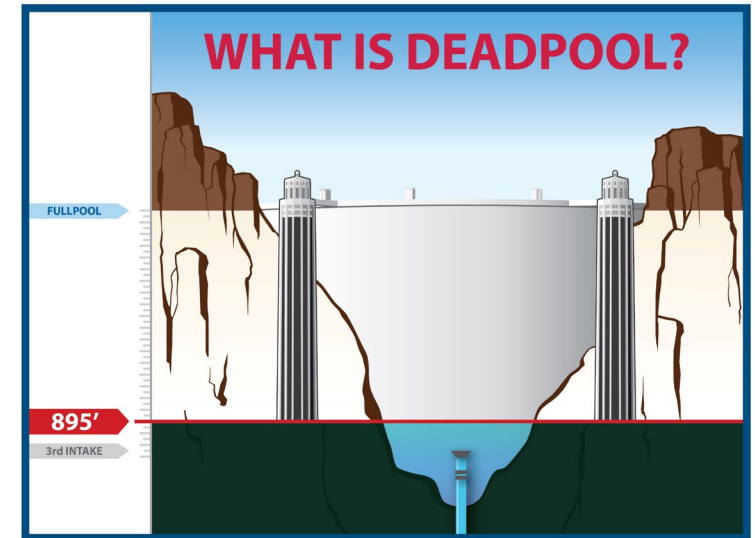
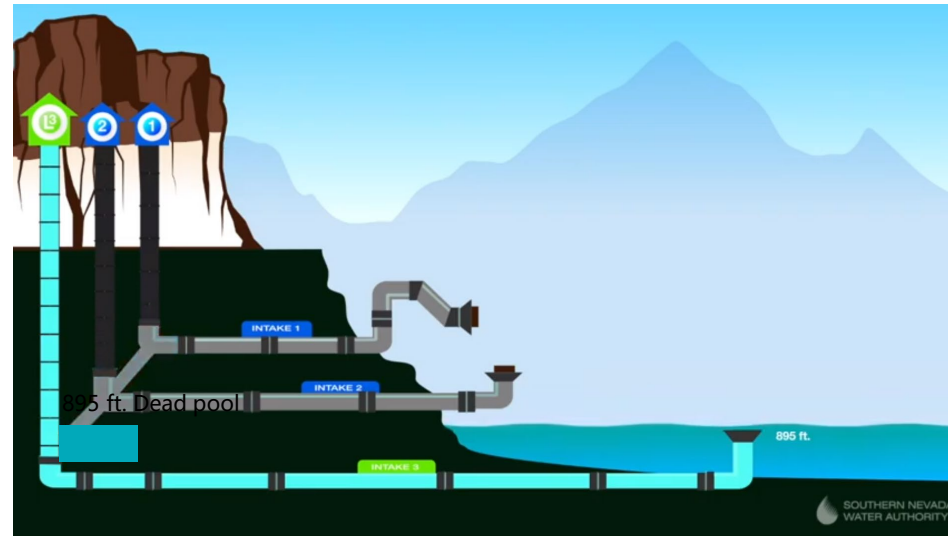
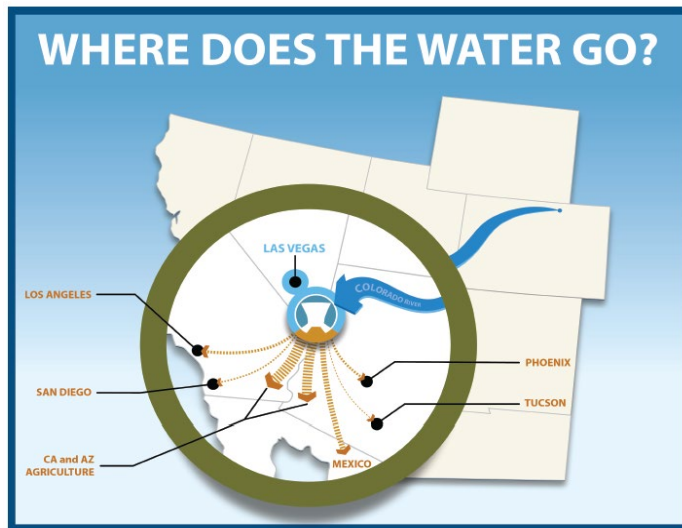


# NEW INFRASTRUCTURE

## *Lake Mead Intake No. 3 and Low Lake Level Pumping Station*

Another advantage is that we are upstream from Hoover Dam and have invested \$1.4 billion in a Low Lake Level intake and pumping station

This makes us the most water-secure community in the Southwest



Our third advantage – which shouldn't be discounted – is that water policies have been enacted consistently across jurisdictions, and Southern Nevada's elected officials have demonstrated a willingness to make difficult decisions





Thanks to successful efforts to reduce outdoor usage, the SNWA's agencies serve nearly 800,000 more people with billions of gallons less water than 20 years ago

Southern Nevada  
**POPULATION**



UP  
**49%**

Per Capita  
**WATER USE**



DOWN  
**48%**

Colorado River Water  
**CONSUMPTION**



DOWN  
**26%**

# BUILDING TO THE CONDITIONS

No one would question developing to earthquake safety standards in San Francisco or hurricane standards in Florida.

In Southern Nevada, water scarcity is our natural disaster





# CONSERVATION PRIORITIES

There are five major uses of water that cannot be recovered:

- Landscape irrigation
- Water feature evaporation
- Evaporative cooling
- Export products
- Septic systems





# LANDSCAPE IRRIGATION

New installations of turf are now prohibited except at schools, parks and cemeteries.



A new state law prohibits using the community's water supply to irrigate non-functional grass after 2026





# EVAPORATIVE COOLING

Commercial/industrial cooling uses billions of gallons of water every year, despite systems being available that use no water

The SNWA is considering a moratorium on the use of evaporative cooling in new commercial construction



# WATER FEATURE EVAPORATION

Large water features and manmade lakes are no longer allowed



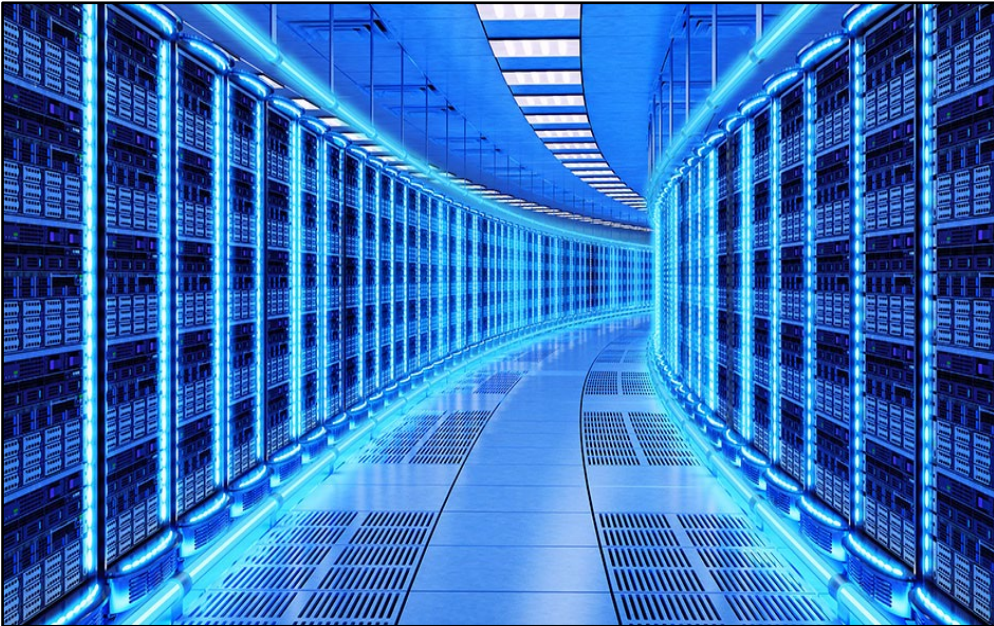
New rules will restrict size of residential pools to 600 square feet





# EXPORT PRODUCTS

The SNWA is developing a Large Water User Policy to address the impact of potential large water users such as bottlers, data centers and hydrogen generation facilities



# SEPTIC SYSTEMS

SNWA member agencies require that any property owners requesting a connection to municipal water also connect to a sanitary sewer system





# INCENTIVES & TOOLS

While restrictions reduce the consumptive footprint of new development, the SNWA offers a suite of incentives and knowledge tools to help existing enterprises reduce their consumptive use



# DECISIONS AHEAD

Despite difficult hydrologic conditions,  
Southern Nevada can avoid running out of water

- Future development is limited only by its unrecoverable water uses
- The business community must invest in its own future by reducing these types of uses
- Managed correctly, our community's water supply will be secure for decades to come

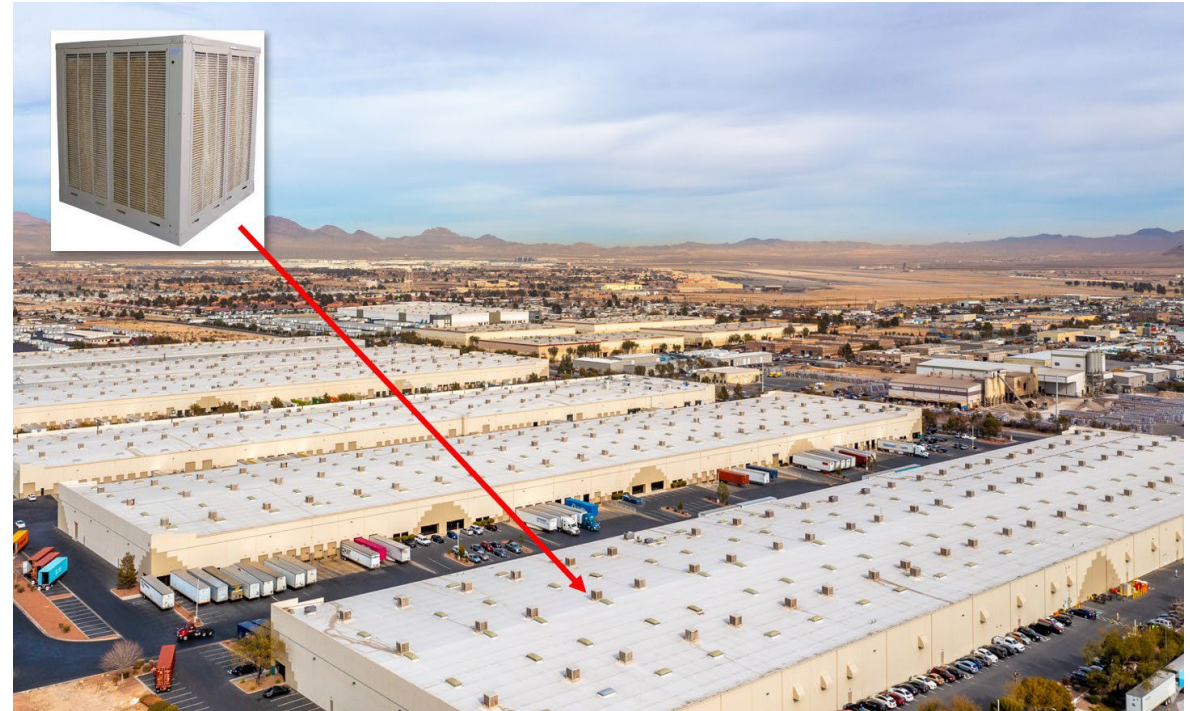




# MAPPING FUTURE ECONOMIC GROWTH

Southern Nevada has an opportunity to chart its own course by deciding what kind of development it embraces and how those entities operate

- What return on investment does this community want for its remaining water?
  - One evaporatively cooled 250,000-square-foot warehouse can consume as much water as ~1,500 dry-cooled professional buildings
  - One large evaporatively-cooled data center can consume about as much water a year as ~10,000 new homes
  - One bottling plant can consume as much water as more than 2,500 neighborhood retail centers



Buildings shown are ~250,000 square feet

# CONCLUSION

Working together, we can navigate this crisis.

Our success depends entirely upon our willingness to adapt.



J.C. Davis  
Enterprise Conservation Manager