



Creating and Maintaining a Sustainable Community

CREATING AND MAINTAINING A SUSTAINABLE COMMUNITY

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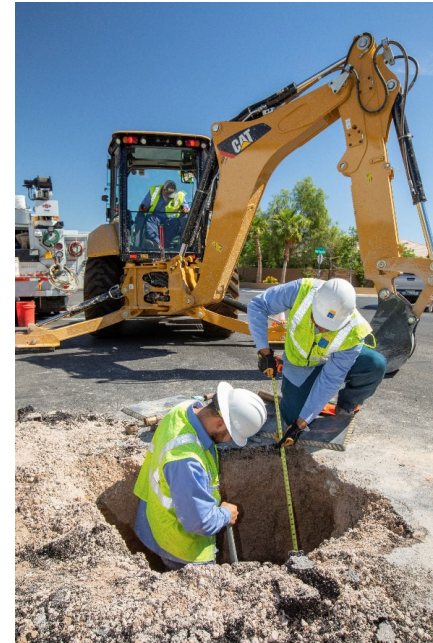


Las Vegas Valley Water District
Southern Nevada Water Authority
Springs Preserve™



LAS VEGAS VALLEY WATER DISTRICT

- 42 reservoirs (936 MG storage)
- 53 pumping stations
- 7,189 miles of underground water mains
- 147,147 valves
- 43,000 fire hydrants
- 440,000 active service accounts
- Over 1.5 million people served in Southern Nevada





SOUTHERN NEVADA WATER AUTHORITY



- **7 water and wastewater agencies**
- **Includes 4 cities and unincorporated county**
- **Coordinates resource management at regional level**

SNWA Responsibilities

The Southern Nevada Water Authority is the regional agency responsible for maintaining Southern Nevada's water resources.



CONSERVATION

Incentives, Programs,
Regulation and Pricing



WATER SUPPLY PLANNING

Developing and managing
regional water supplies



WATER QUALITY

Maintaining and
protecting water quality



INFRASTRUCTURE

Building and operating
major facilities



STEWARDSHIP

Protecting
environmental resources

Engineering



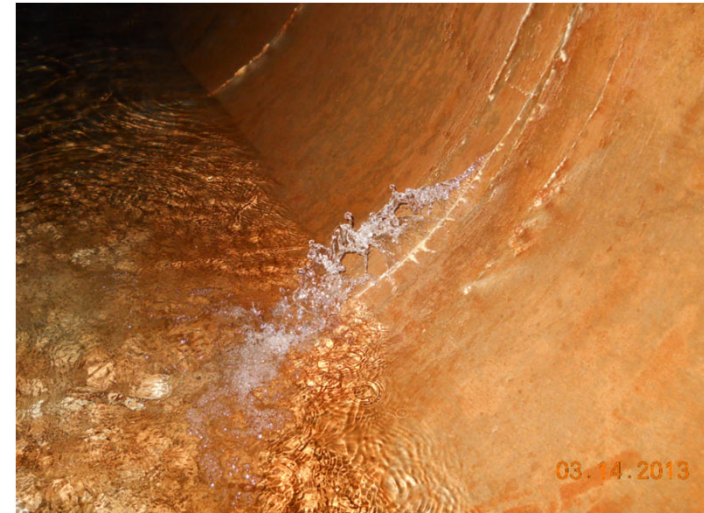
Infrastructure Management



Customer Care and Billing



Asset Management



Leak Detection and Cathodic Protection

Maintenance Engineering

Infrastructure Replacement
Vault Rehabilitation & Retrofit
SCADA & Fiber Optics/Communication



Planning & Engineering Services

- Hydraulic Model & Master Planning
- Plan Reviews for Development
- Mapping
- Permits



Design & Construction Divisions



Our Customers



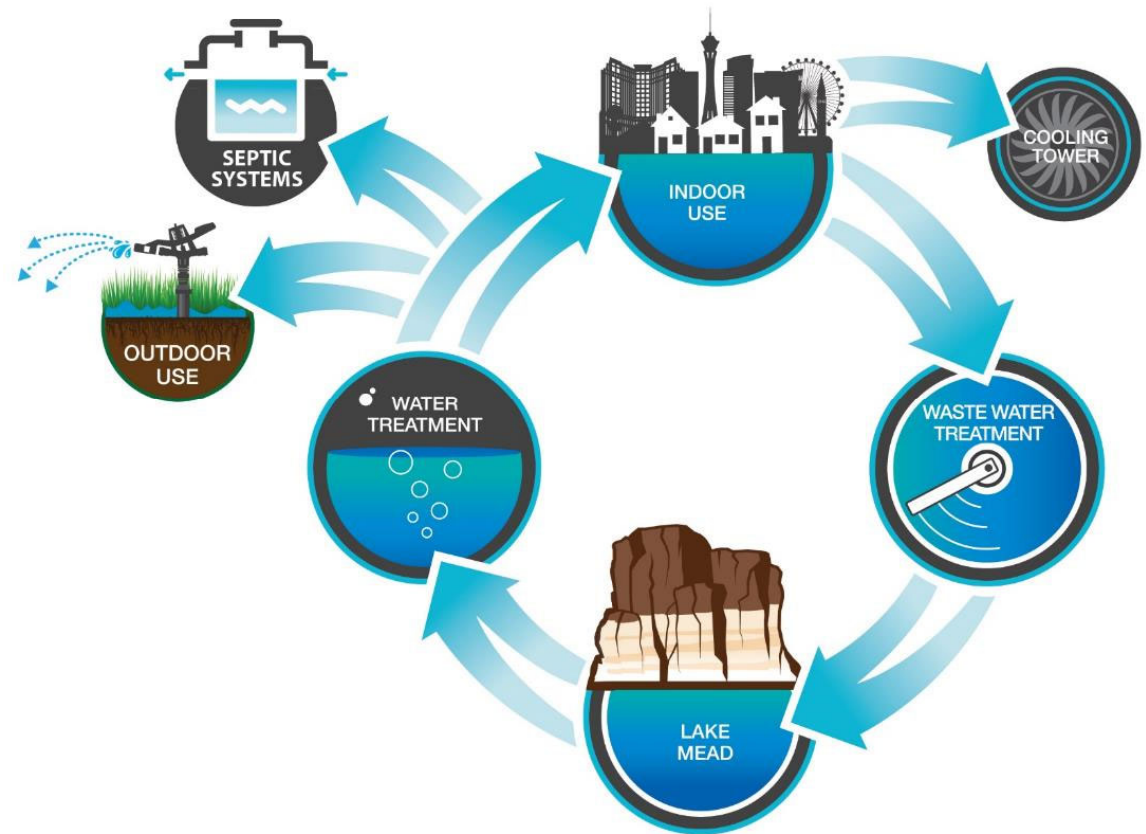
Water Management Strategies

- **Conservation**
- **Water Loss Management**
- **Operational Efficiencies**
 - Hydraulic model
 - Energy efficiency
- **Water Quality**
- **Reliability**

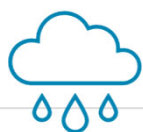


Southern Nevada's conservation programs focus on areas where water is lost permanently.

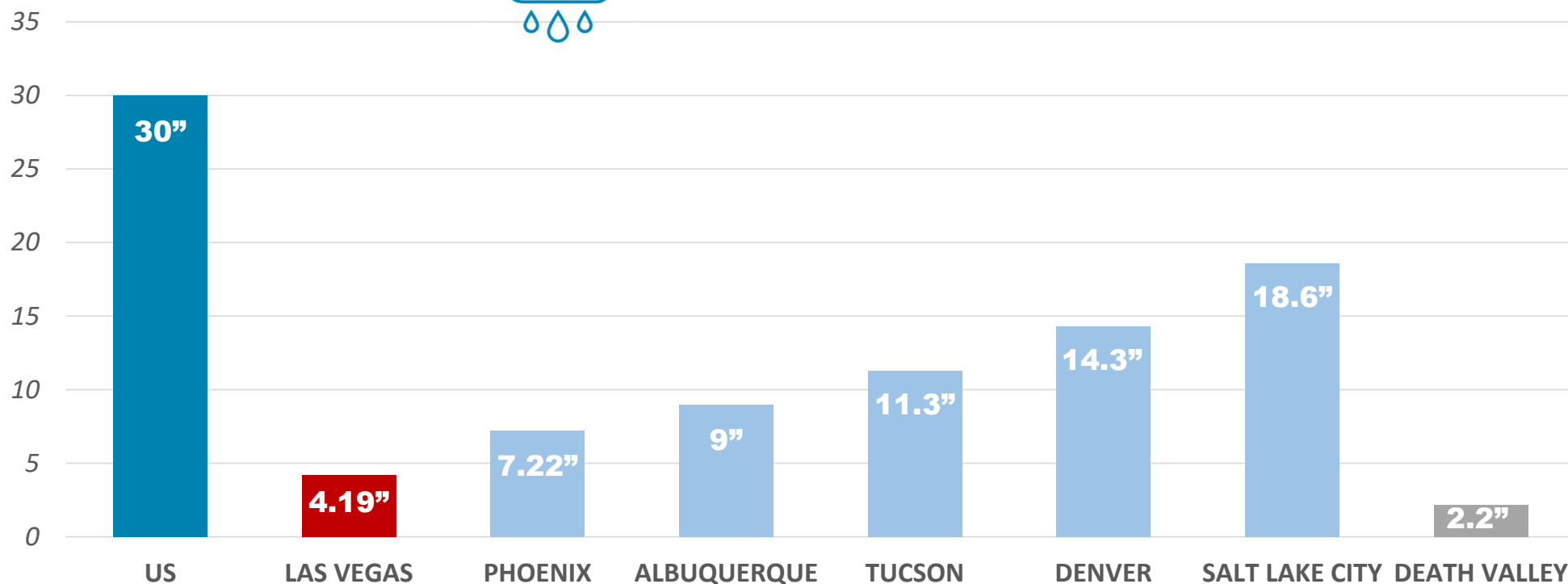
Southern Nevada recycles 99% of water used indoors, thereby extending the availability of its resources.



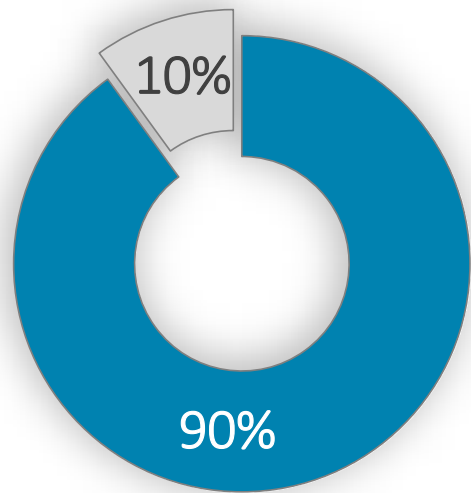
Las Vegas is the driest metropolitan area in the United States.



ANNUAL PRECIPITATION IN INCHES



Las Vegas is nearly fully dependent on Colorado River resources.



■ Colorado River ■ Groundwater



Since 2002, Southern Nevada has made significant conservation achievements, but work remains to reduce consumptive uses.

Southern Nevada
POPULATION



UP
52%

Per Capita
WATER USE



DOWN
58%

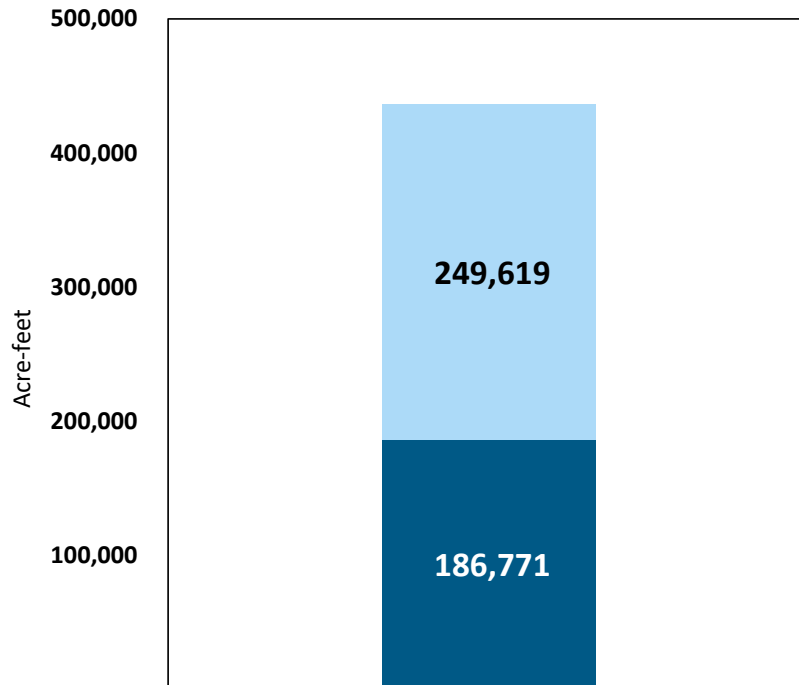
Colorado River Water
CONSUMPTION*



DOWN
42%

Water Delivered vs Consumptive Use

Total estimated diversions in 2023 were 436,390 acre-feet.
Nevada's Colorado River shortage allotment was 275,000 acre-feet.

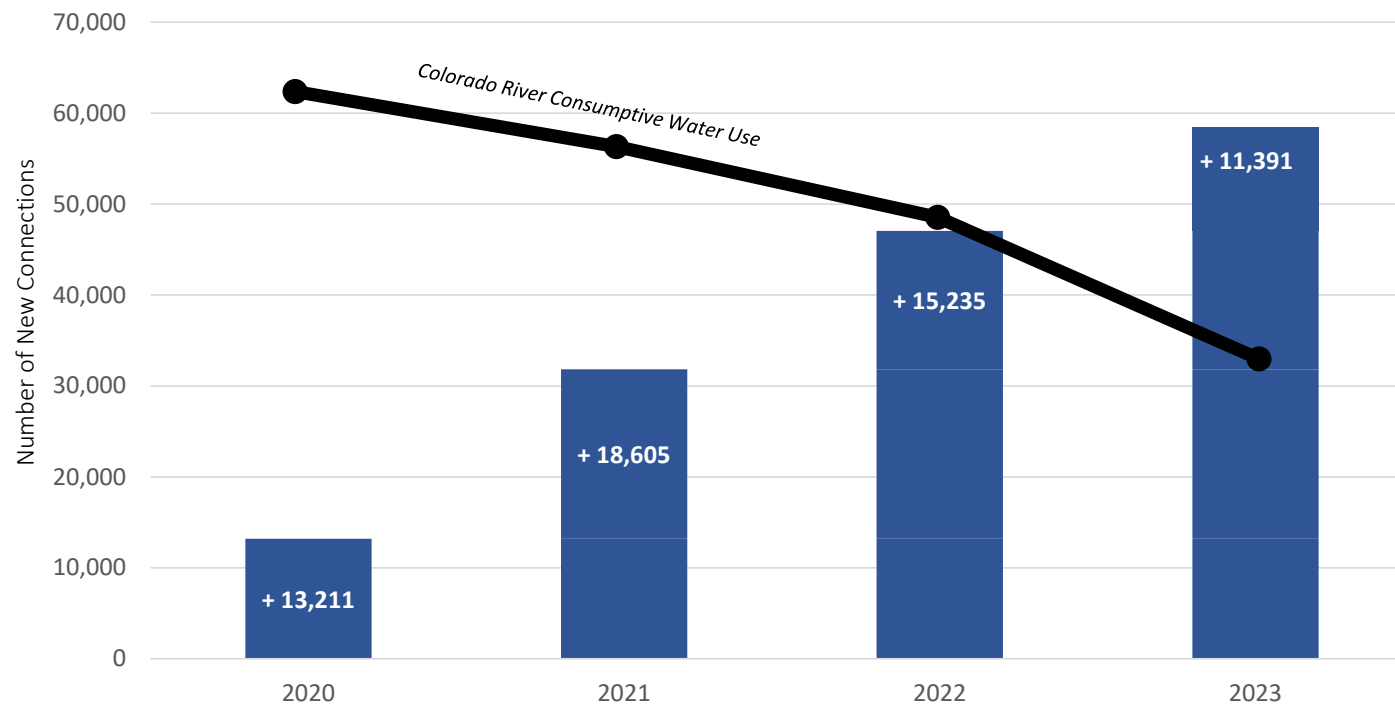


 Return Flow Credits

 Consumptive Use

Conservation matters.

Despite the addition of nearly 60,000 new connections since 2020, water use has declined by 26% in the same time period.



Building to the conditions – Water Scarcity

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



Lake Mead - Calville Bay Marina, 2022

Conserving resources is a community effort.



GRASS

- No new golf courses
- Golf course water budgets
- Cool to warm season grass
- Non-functional grass
- Park improvements



EFFICIENCY

- Large Water User Policy
- Leak Resolution
- Asset Management
- Septic Conversion Program



NEW DEVELOPMENT

- Cooling Standards
- Pool Standards
- Limit new grass
- Septic Standards



ADAPTATION

- Cooling Rebates
- Grass Rebates
- Tree Incentives
- Tree Canopy Investments



86

GPCD

GOAL

A new law enacted in 2021 prohibits the community's water supplies from watering existing non-functional grass by 2027.

What is non-functional grass?

- Neighborhood entries
- Streetscapes
- Medians
- Roundabouts
- Non-residential applications (commercial buildings, office parks, etc.)



Consumptive Use: New turf installations prohibited



In 2022, Southern Nevada's municipalities approved ordinances and rules that prohibit the installation of new grass except in parks, schools and cemeteries.

Consumptive Use: Golf course water budgets

Local golf courses are subject to water budgets.

- **Previous water budget: 6.3 acre-feet per irrigated acre**
- **January 2024: 4.0 AFY per irrigated acre**



Consumptive Use: Evaporative cooling

Behind irrigation, evaporative cooling represents the largest consumptive water use.

Regional entities have adopted the evaporative cooling policy, which became effective September 1, 2023.



Consumptive Use: Pool evaporation

Some area pools exceed 3,000 square feet and evaporate more than 145,000 gallons of water per year.

New pool construction is limited to 600 square feet of surface area (single-family residential).

470 sq. ft = average pool size in Southern Nevada



LVVWD Excessive Use Charge

6% Affected Overall

Designed to affect the top 10% of users, the charge affected only 6% of bills because it motivated customers to take action and make changes

Immediate Response

Of the customers that received an Excessive Use Charge in 2023, about half of them received it only one or two times.

Water Saved

As a result of changes to water rates, 9,511 acre-feet of water was saved in 2023
(3.1 billion gallons)

Revenue Collected

Approximately \$31.6 million was collected, which will support water conservation initiatives

The largest water users use approximately **one-third of total residential water**.

These homes typically have:

- **Large amounts of grass**
- **Turf that is inefficiently watered**
- **Spray irrigation regardless of landscape**
- **Not following watering schedule**

Many of the largest water users also have high-volume, unresolved leaks despite multiple notifications from LVVWD.



Walk the Talk

- Cooling building alternatives
- Desert landscape
- Deploying remote sensing technology
- Leak repair financial assistance



Cost Benefit – the Value of Water

- **Water means stability and economic development**
- **Water Investment Rating Tool**
 - **Governor's Office of Economic Development**
 - **Las Vegas Global Economic Alliance**
 - **City and County Economic Development**



Pushback is Healthy

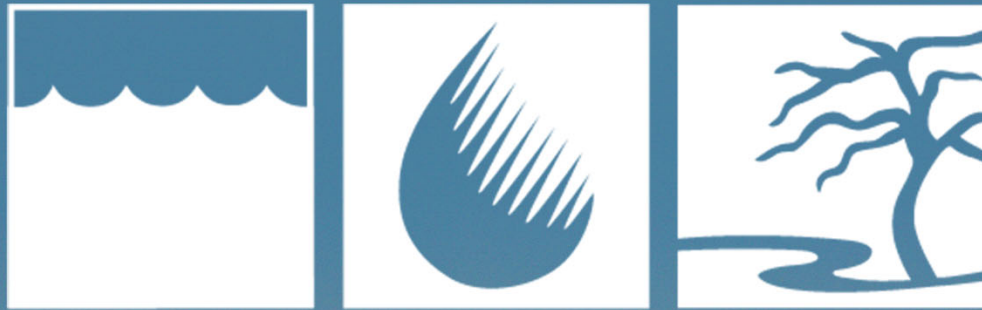
- Have to be transparent
- Educate the elected officials, chambers, residents, etc.
- Provide updates at public meetings
- IRPAC and CAC



The Future of Water

- **Climate change is real**
- **Limited supply of fresh water**
- **Reduce, recycle and reuse**
 - We can't let wastewater be water wasted
- **One world – one water**
 - Think beyond your reach





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