



SOUTHERN NEVADA  
WATER AUTHORITY®

# WATER RESOURCE UPDATE

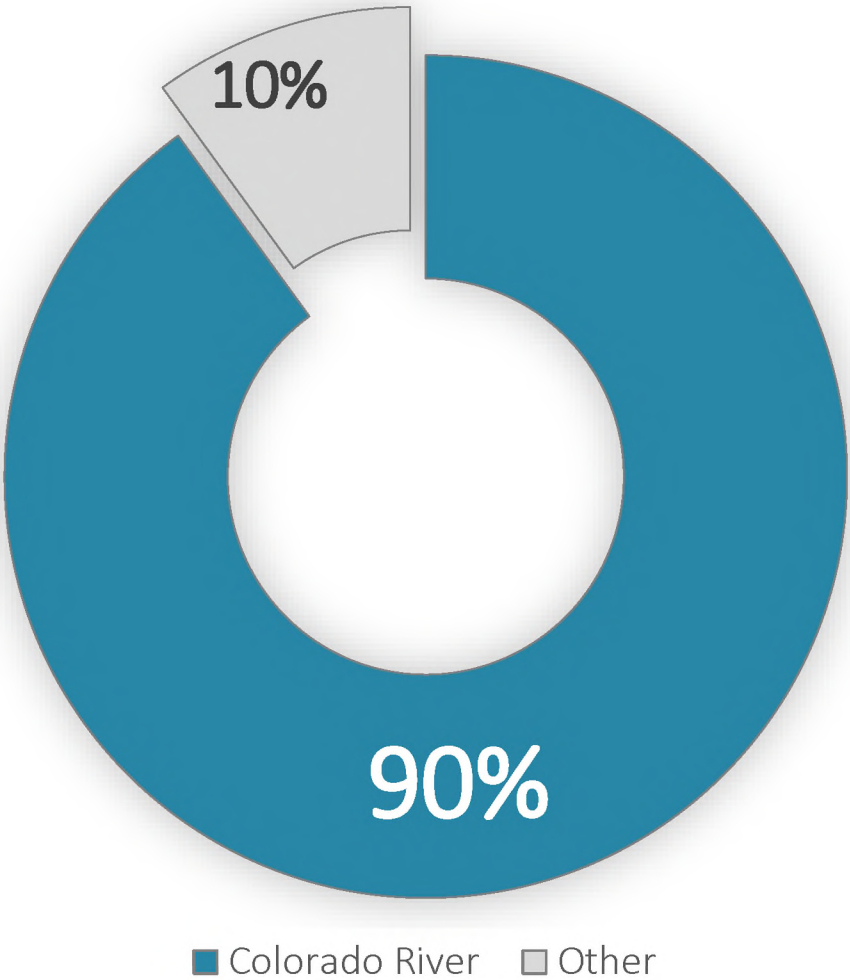
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JOHN ENTSMINGER,  
GENERAL MANAGER



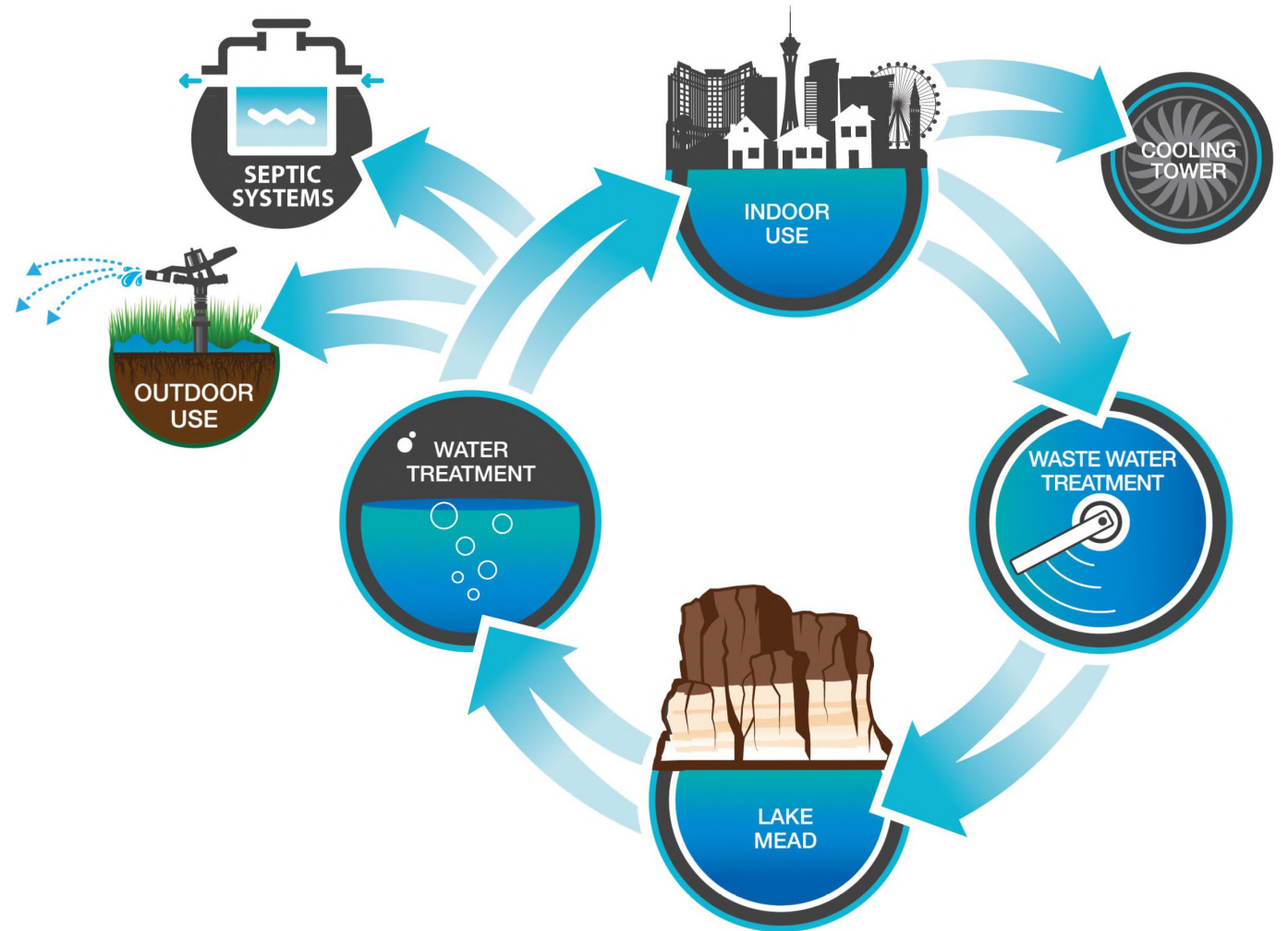
# WATER RESOURCES

Southern Nevada is nearly fully reliant on the Colorado River to meet the community's water demands.



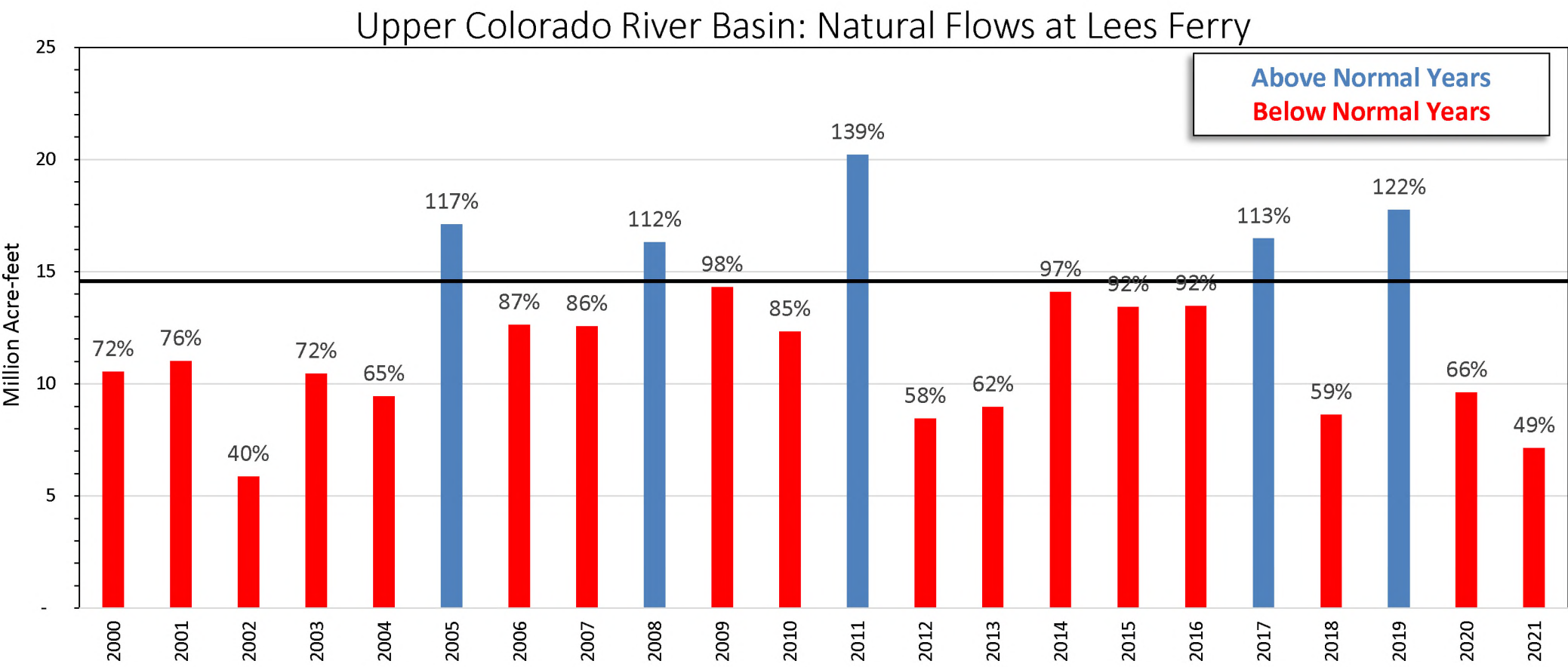
# RETURN FLOWS

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



# DROUGHT

In the early 2000s, the Colorado River began to experience significantly decreased inflows.





# DROUGHT

Drought conditions have significantly depleted Lake Mead's storage

1999



95%

2004



46%

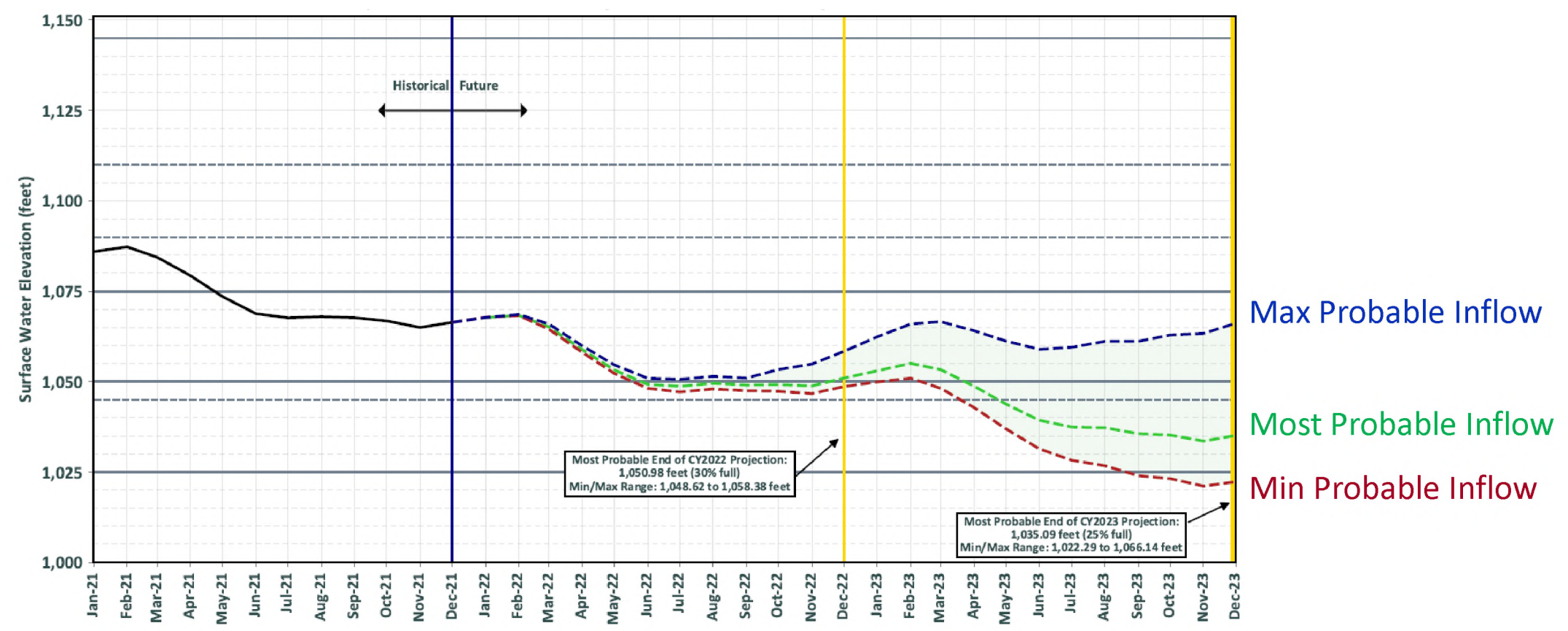
2022



34%

# LAKE MEAD ELEVATION PROBABILITIES

Lake Mead’s elevations are likely to fall below 1,050 feet as early as 2023.





# SHORTAGE

The federal government declared a shortage on the Colorado River for 2022.

## **In a First, U.S. Declares Shortage on Colorado River, Forcing Water Cuts**



Lake Mead, top left, and Boulder City, Nev., in July. The last time the lake was anywhere near full was two decades ago. Patrick T. Fallon/Agence France-Presse — Getty Images

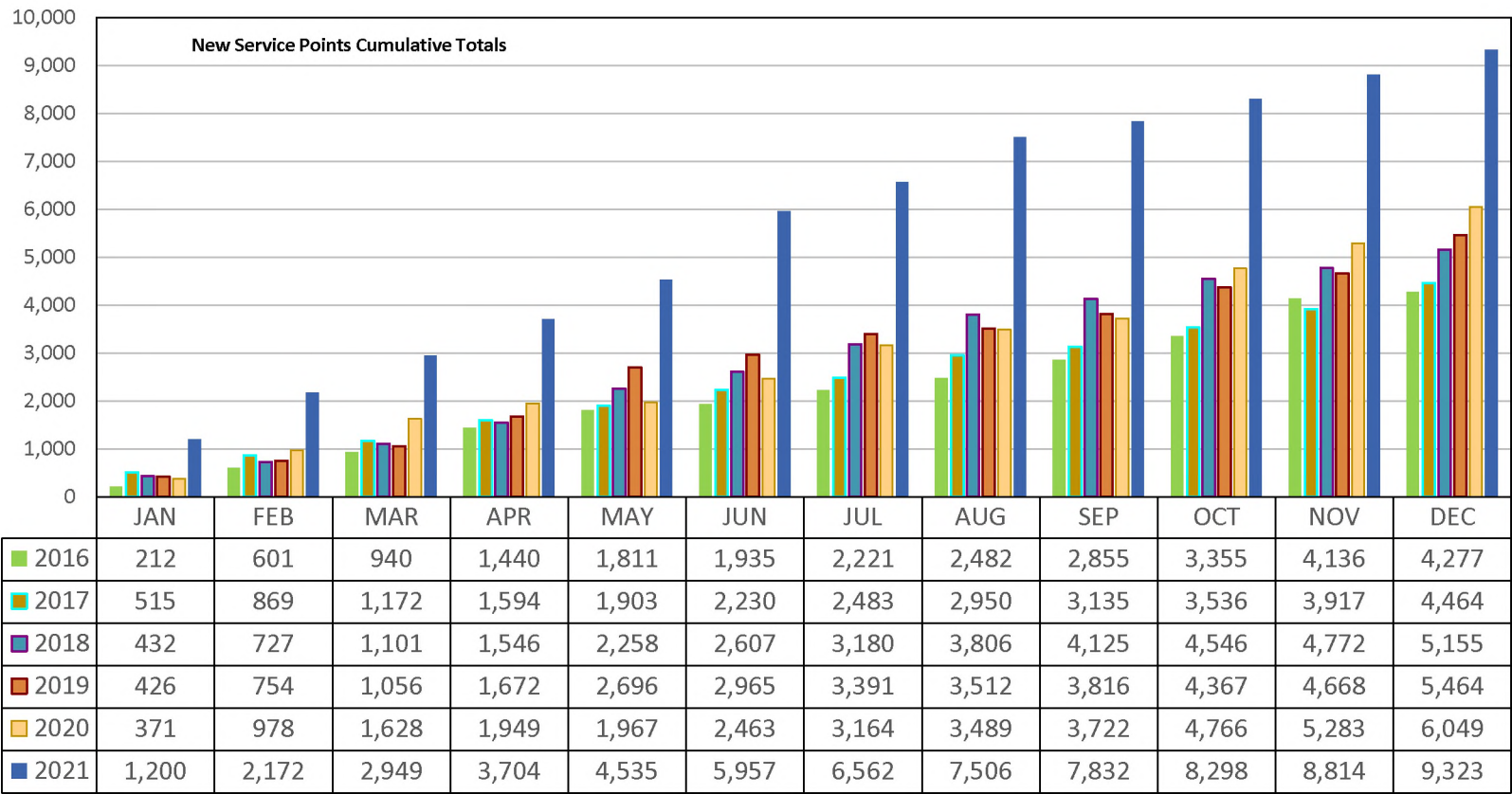
# LAKE MEAD SHORTAGE LEVELS

Lake Mead Elevation	Shortage Reduction	Available
1,090+ feet	0	300,000 AFY
1,075 – 1,090 feet	-8,000 AF	292,000 AFY
1,050 – 1,075 feet	-21,000 AF	279,000 AFY
1,045 – 1,050 feet	-25,000 AF	275,000 AFY
1,025 – 1,045 feet	-27,000 AF	273,000 AFY
< 1,025 feet	-30,000 AF	270,000 AFY



# WATER RESOURCE PLANNING

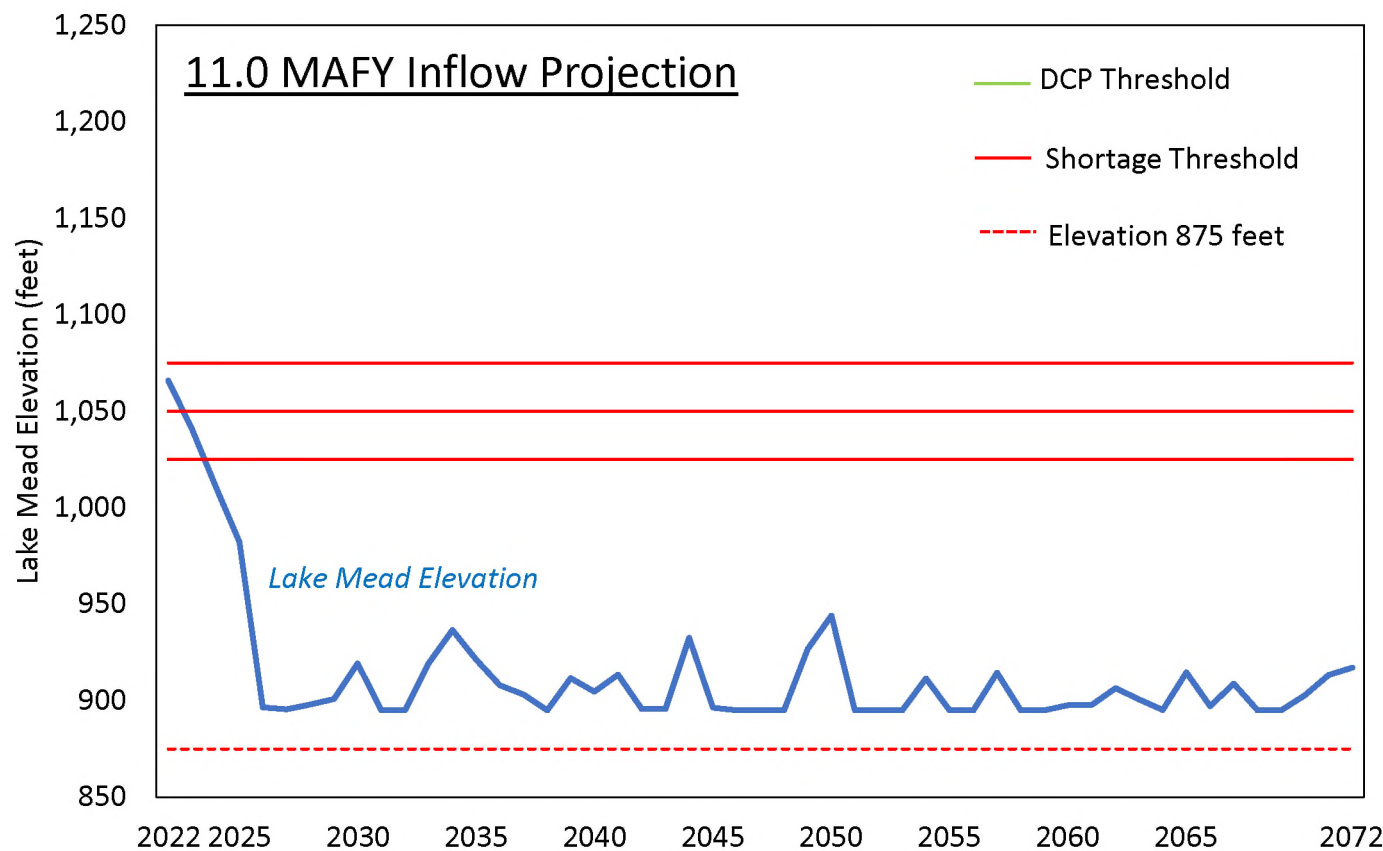
New account growth and longer-term forecasts are much higher than previous years.



New Account Growth (LVVWD)

# WATER RESOURCE PLANNING

The hydrology scenarios contemplated within SNWA’s 2020 Water Resource Plan are the lowest ever considered in local planning efforts.

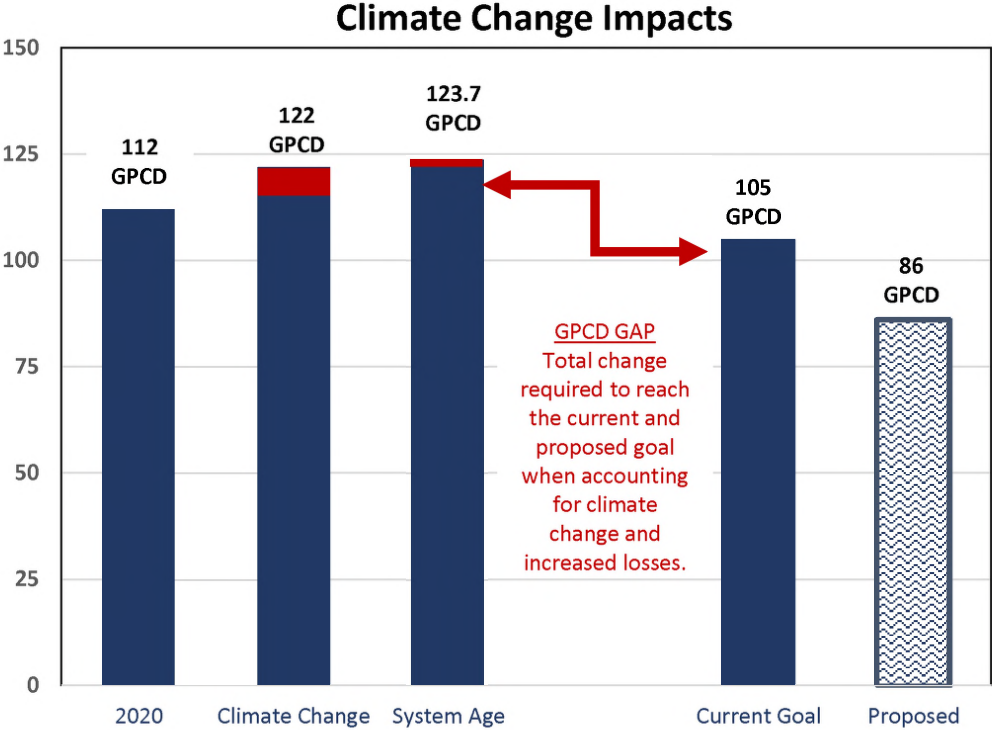
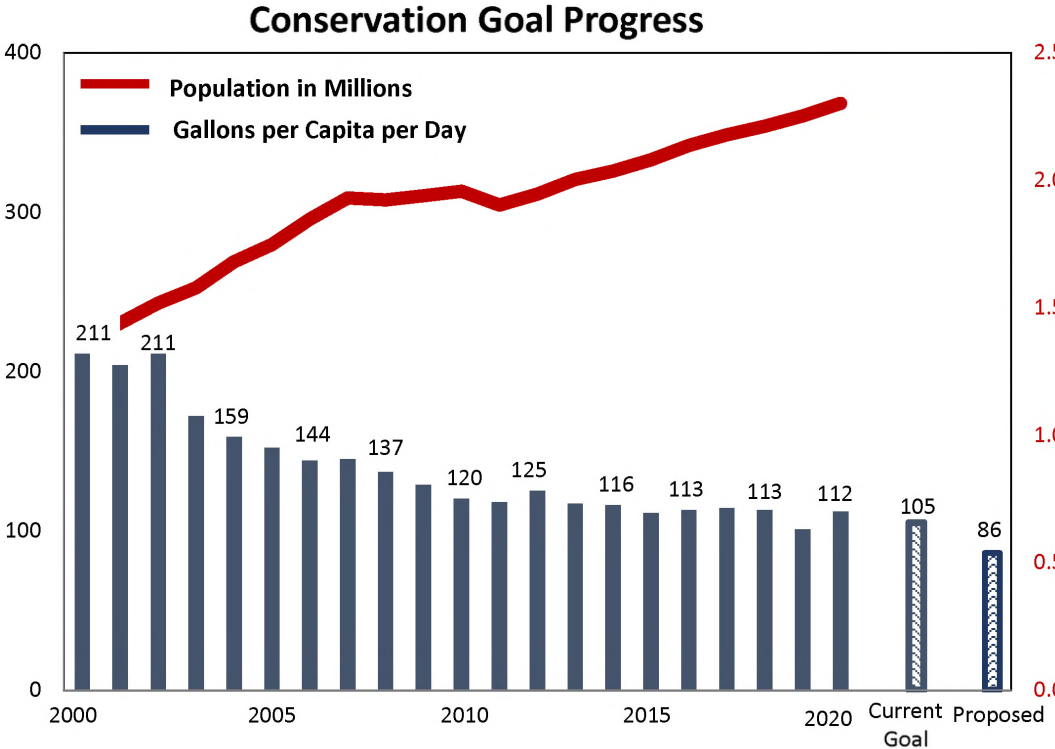


Over the most recent 22-year period, there were nine years with inflows at or below 11.0 million acre-feet.



# WATER RESOURCE PLAN

Higher levels of efficiency are needed to address population growth, offset supply impacts due to shortage, reduce upward pressure from climate change, and maximize the availability of existing water supplies.



# WATER CONSERVATION

**Southern Nevada has made progress since 2002,  
but considerable work remains.**

Southern Nevada  
**POPULATION**



Per Capita  
**WATER USE**



Colorado River Water  
**CONSUMPTION**





# REDUCING CONSUMPTIVE USE

**Conservation initiatives focus on reducing consumptive water use.**



**Landscape Efficiency**



**Cooling Efficiency**



**Water Loss Control**



**Irrigation Compliance**



**New Development Efficiency**

# REDUCING CONSUMPTIVE USE

## Programs/Policies Underway

- Existing conservation programs
- Converting cool season turf
- Enhance leak resolution (AMI)
- Enhance watering schedule compliance
- Asset management investments
- No new golf courses\*
- Large water user policy\*
- AB 356 / Turf conversions\*
- Cooling efficiency standards (evaporative cooling)\*
- Limit new turf installations\*

*\*Indicates recently-approved initiative*

## Future Programs/Policies

- Reducing golf course water budgets
- Pool size regulations
- Park efficiency improvements (park water budgets)
- Implement pricing changes

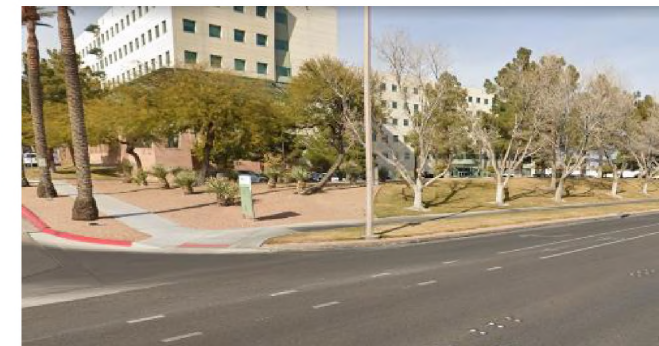


# NONFUNCTIONAL TURF

**A new law passed during the 81st Legislative Session prohibits our community's water supplies from watering existing unused grass by 2027.**

*Single family residential homes excluded.*

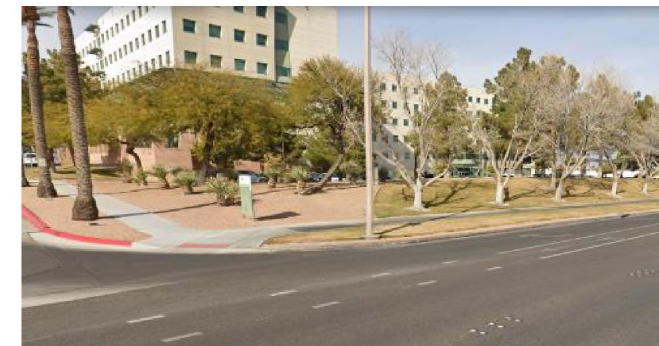
- Neighborhood entries
- Streetscapes
- Medians
- Roundabouts
- Non-residential applications (commercial buildings, office parks, etc.)



# NONFUNCTIONAL TURF

**In January, the SNWA Board approved its definitions of functional and nonfunctional turf.**

***Per AB356, these definitions will be included in local purveyor Service Rules.***





# NO NEW TURF

**A recently-approved resolution will prohibit new installations of turf outside of schools, parks and cemeteries.**



# EVAPORATIVE COOLING MORATORIUM

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

**An approved moratorium will limit cooling towers and water-cooled HVAC systems.**





# COOLING

**It is essential to employ water-efficient technologies when developing new properties or expanding existing ones.**

**Additionally, existing wet-cooled systems can be modified to optimize water consumption.**





# SNWA INCENTIVES

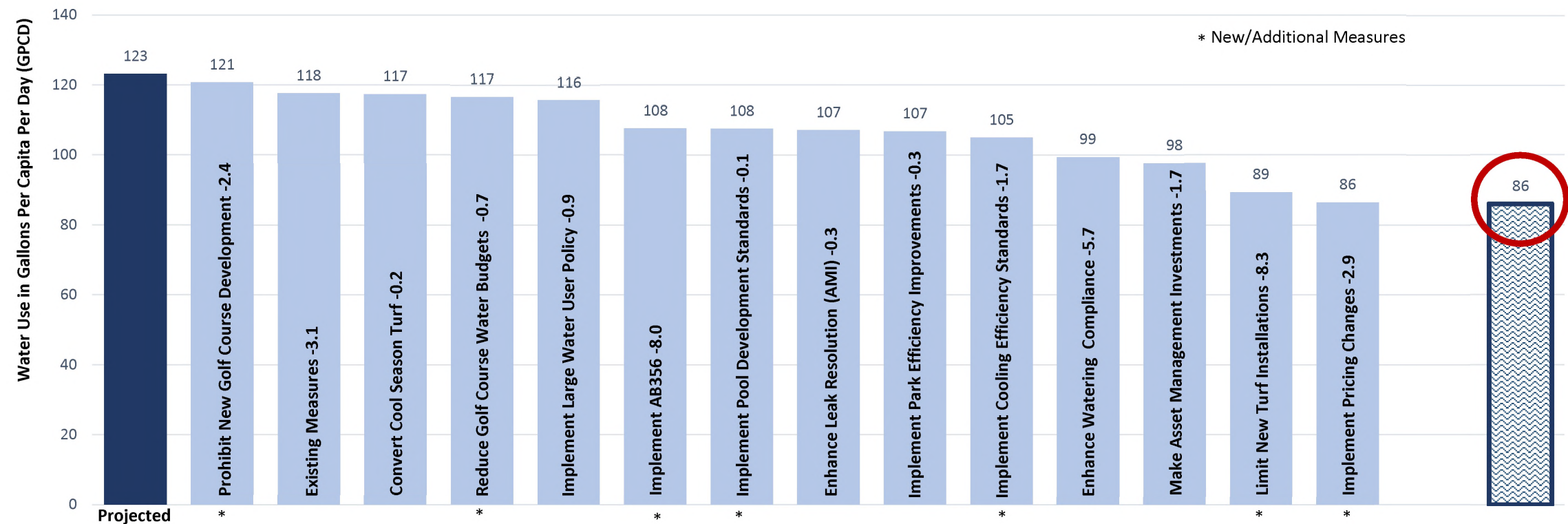
**The SNWA currently will pay up to 50 percent of the product cost for replacing an existing wet-cooled system (HVAC or evaporative) with a dry-cooled unit.**

**Incentives are also available for upgrades to control systems, drift eliminators, etc. that reduce consumptive water use.**



# CONSERVATION GOAL

Achieving higher levels of efficiency will extend the availability of current resources and reduce the need for temporary and future resources.

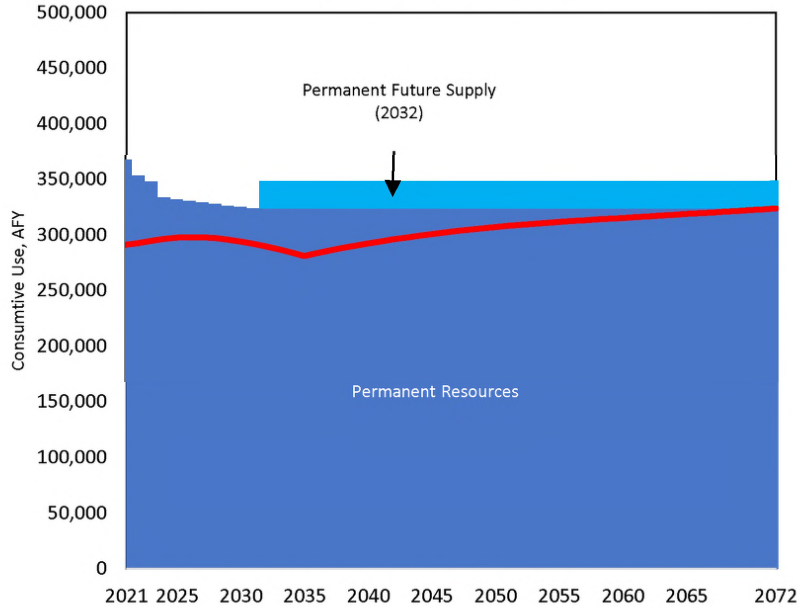


It will also offset supply reductions associated with shortage and help to reduce upward pressure on demands associated with climate change.

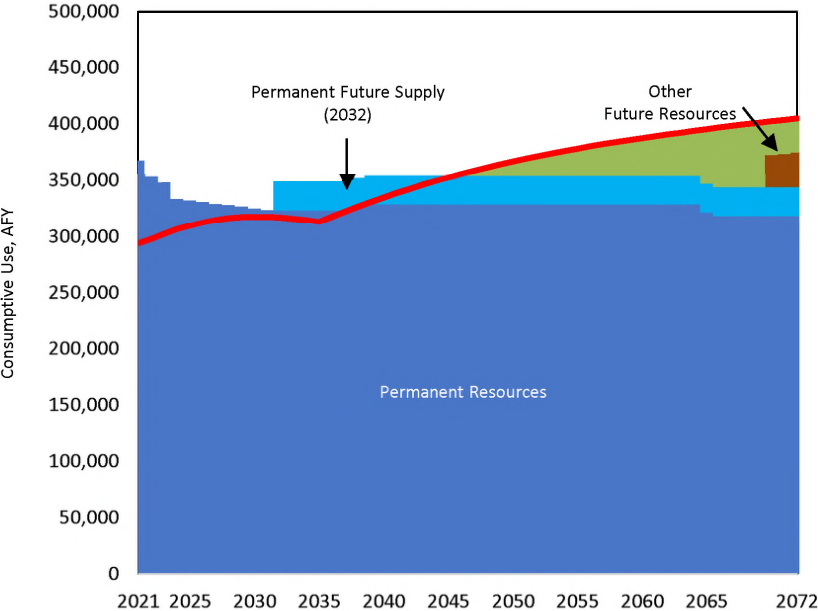
# 2021 WATER RESOURCE PLAN

## 11.0 MAFY Inflow Scenarios

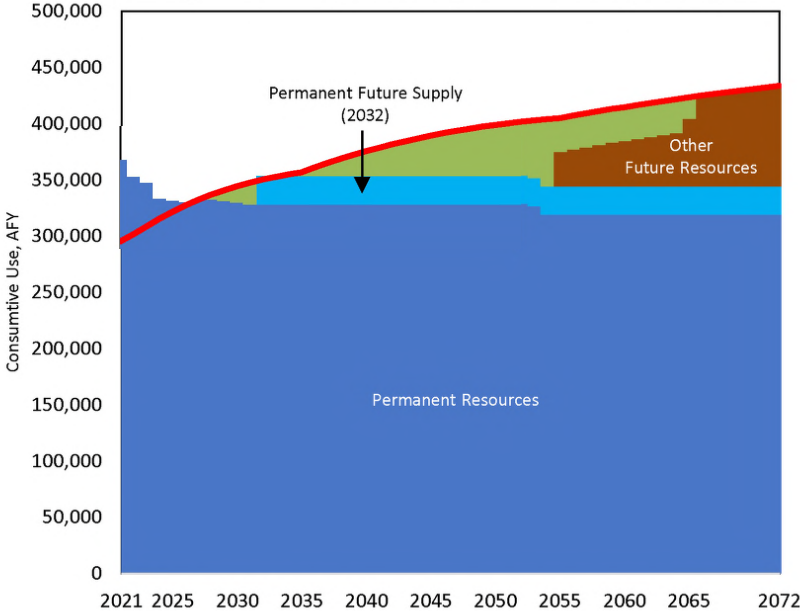
**Lower Demand  
(86 GPCD by 2035)**



**Upper Demand  
(86 GPCD by 2035)**



**Upper Demand  
(98 GPCD by 2035 and 92 GPCD by 2055)**







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