

**ADDRESSING  
CHALLENGES:  
WATER CONSERVATION**

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SOUTHERN NEVADA WATER AUTHORITY®

# SOUTHERN NEVADA

- 2.3 million residents
- Dry, arid landscape
- Less than 4 inches of rainfall a year
- Relies on Colorado River to meet 90 percent of supplies
- Water used indoors is returned to Lake Mead
- 60% of deliveries = outdoor irrigation



# SOUTHERN NEVADA WATER USE

Southern Nevada  
**POPULATION**



Per Capita  
**WATER USE**



Colorado River Water  
**CONSUMPTION**



# SOUTHERN NEVADA WATER USE

When drought began in the early 2000s, Southern Nevada implemented conservation measures that were considered “aggressive” for a western U.S. metropolitan area:

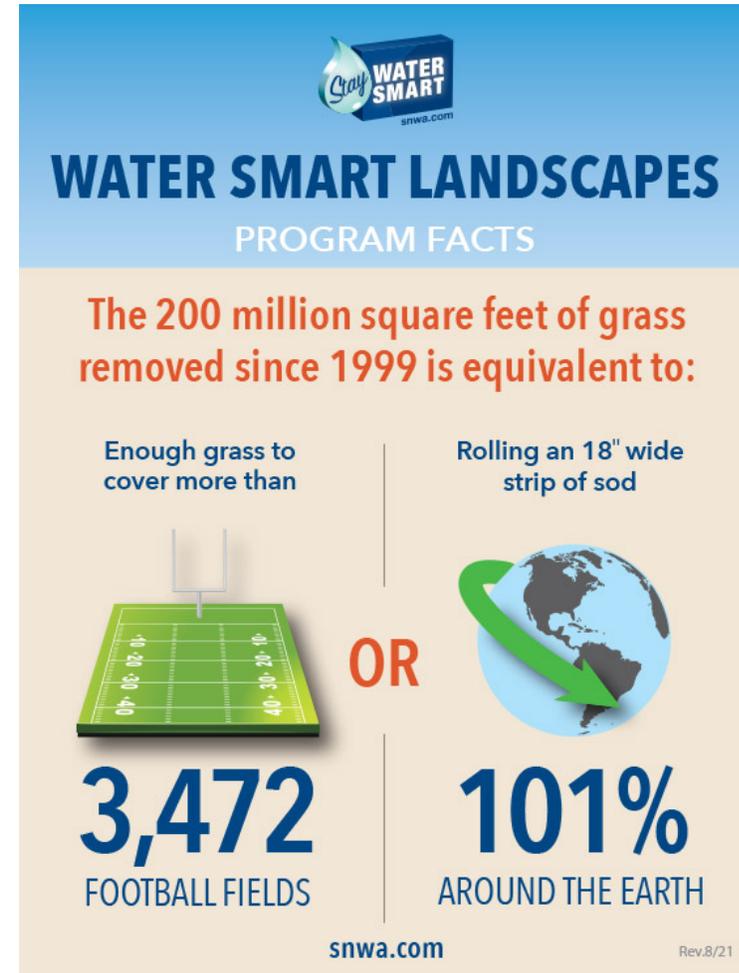
- **Development Codes**
  - No turf front yards; 50% backyards
  - No turf commercial or industrial applications
- **Mandatory Watering Schedules**
  - Seasonal Watering Restrictions (Time-of-Day and Day-of-Week)
- **Limited fountains and aesthetic water uses**
- **Water waste enforcement**
- **Turf rebate program**



Since 2005, grass is prohibited in front yards and limited to 50% in back.

# SOUTHERN NEVADA WATER USE

The rebate program has been successful helping reduce the amount of nonfunctional turf in the community.



The infographic features a blue header with the 'Cray WATER SMART' logo and the website 'snwa.com'. Below the header, the title 'WATER SMART LANDSCAPES' is written in large blue letters, followed by 'PROGRAM FACTS' in smaller white letters. The main content is on a light beige background. It starts with a headline in orange: 'The 200 million square feet of grass removed since 1999 is equivalent to:'. Below this, two columns are separated by a vertical line. The left column has the text 'Enough grass to cover more than' above an illustration of a green football field with yard lines and a goalpost. Below the field is the number '3,472' in large blue font, with 'FOOTBALL FIELDS' in smaller blue font underneath. The right column has the text 'Rolling an 18" wide strip of sod' above an illustration of a globe with a green arrow looping around it. Below the globe is the number '101%' in large blue font, with 'AROUND THE EARTH' in smaller blue font underneath. A large red 'OR' is positioned between the two columns. At the bottom, 'snwa.com' is on the left and 'Rev.8/21' is on the right.

**WATER SMART LANDSCAPES**  
PROGRAM FACTS

The 200 million square feet of grass removed since 1999 is equivalent to:

Enough grass to cover more than

Rolling an 18" wide strip of sod

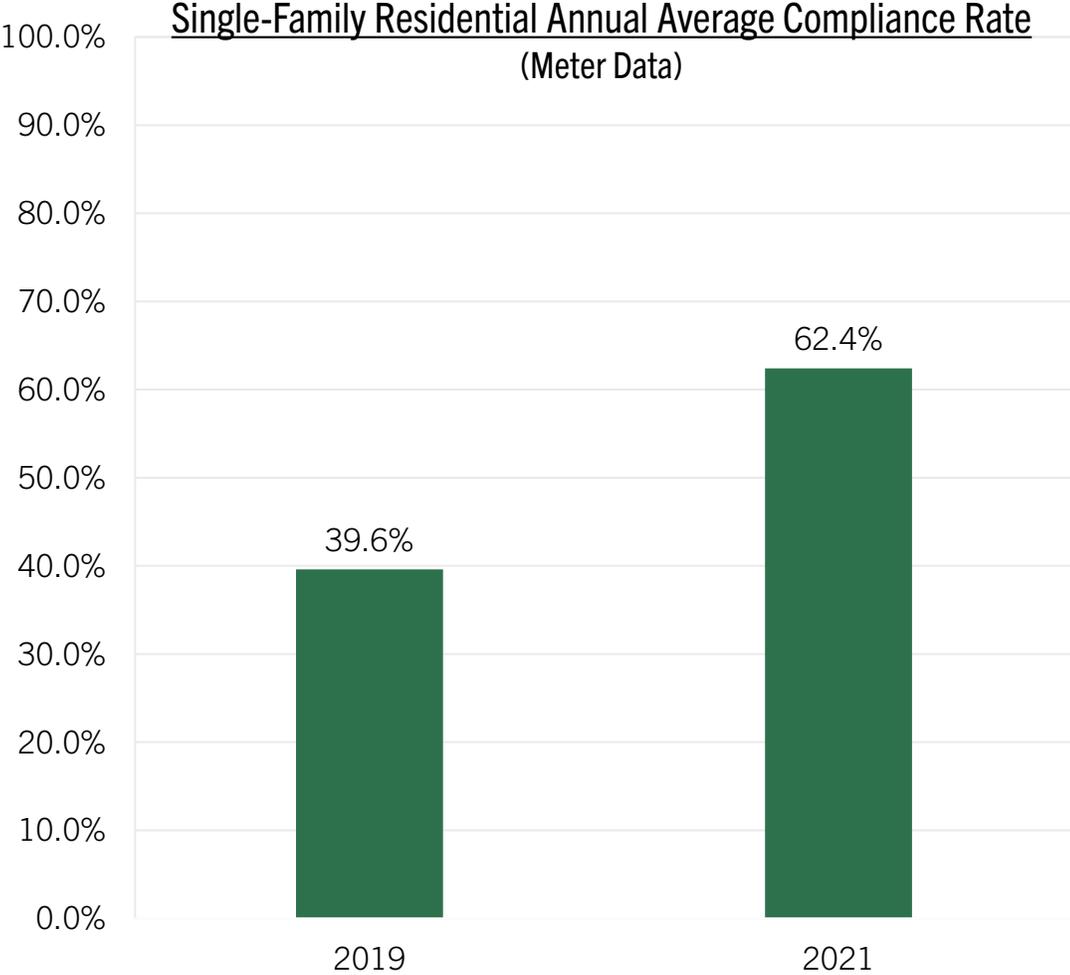
**3,472**  
FOOTBALL FIELDS

**OR**

**101%**  
AROUND THE EARTH

snwa.com Rev.8/21

# WATERING RESTRICTIONS

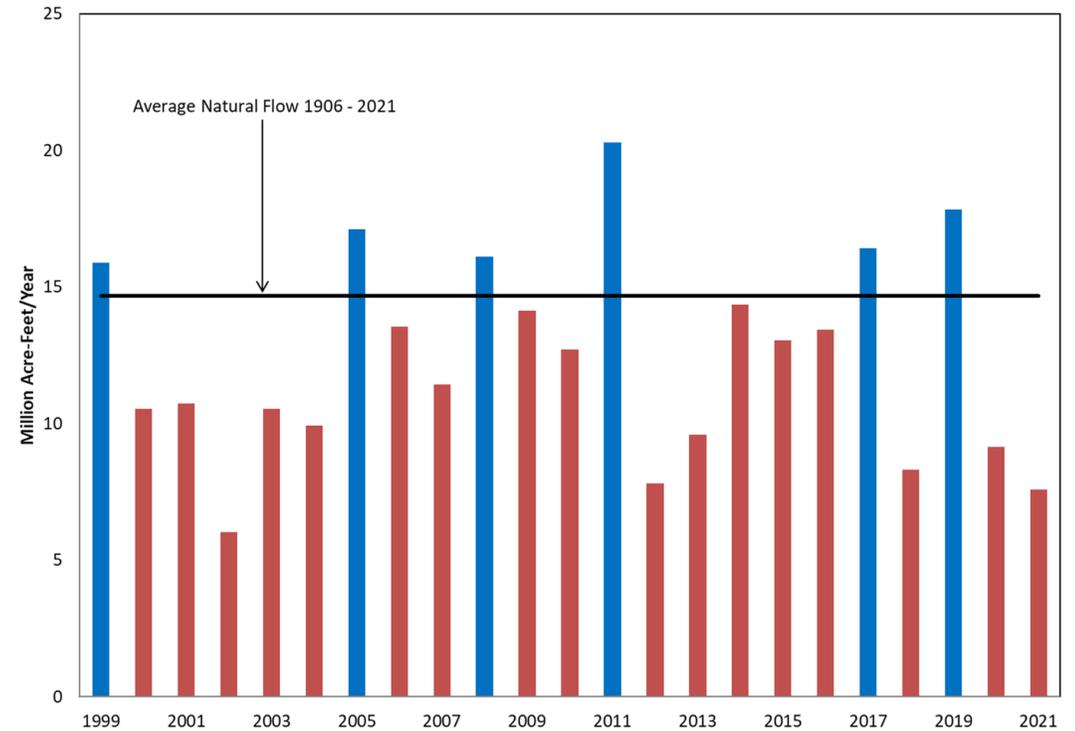


**Our compliance rate is up.**

- **Investments in marketing**
- **Direct notification to non-compliant customers**
- **Water waste investigations**
- **Press about drought/shortage**

# DROUGHT PROJECTIONS

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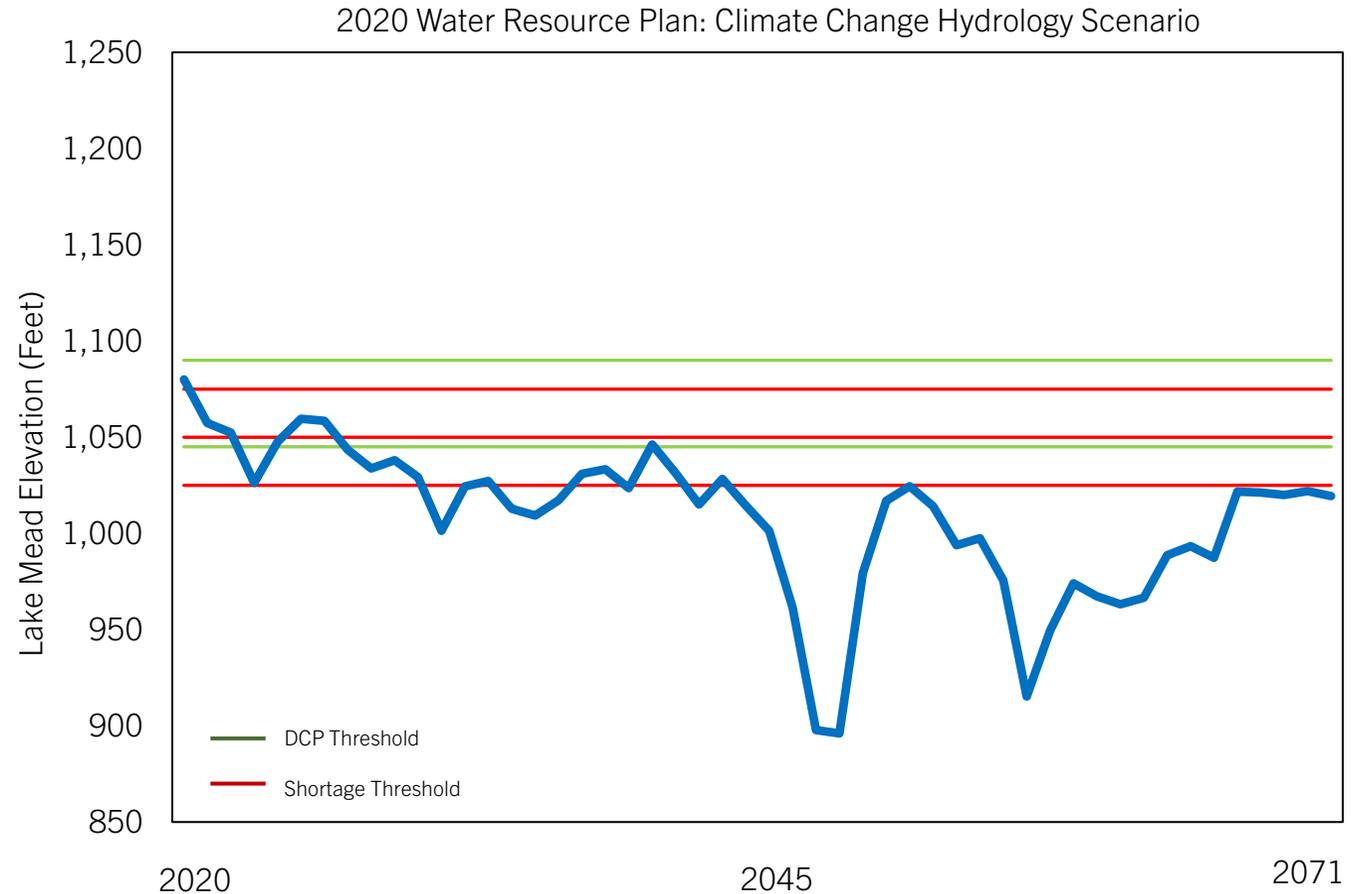
**Annual Colorado River inflows have been at or below 11.0 million acre-feet for nearly half of the last 22 years.**

**Further declines are expected.**

# RESOURCE PLANNING: 12.9 MAFY INFLOWS

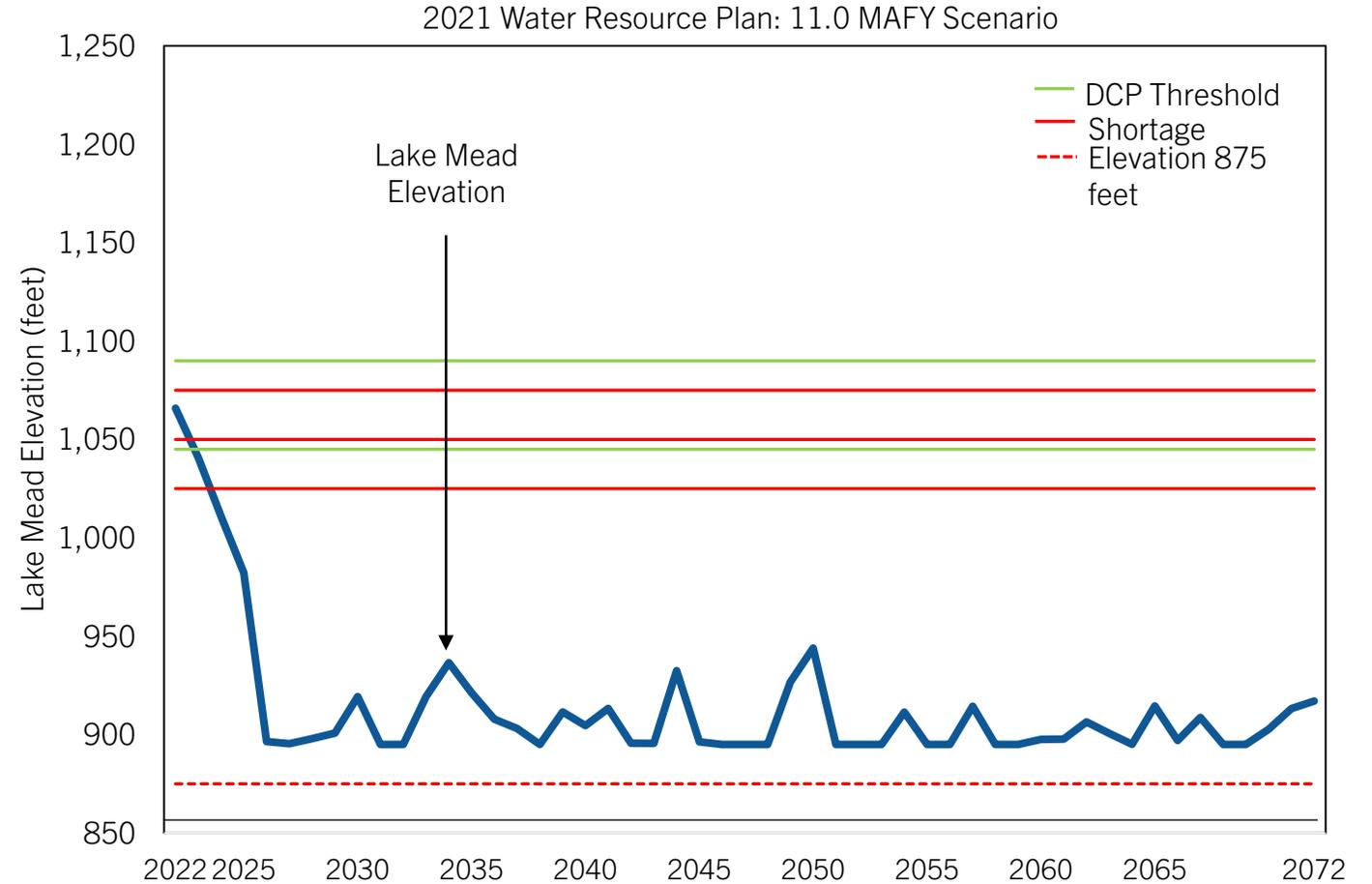
In the SNWA's current Water Resource Plan, the lowest inflow scenario was 12.9 MAFY.

2020 Conservation Goal: 105 GPCD by 2035



# RESOURCE PLANNING: 11.0 MAFY INFLOWS

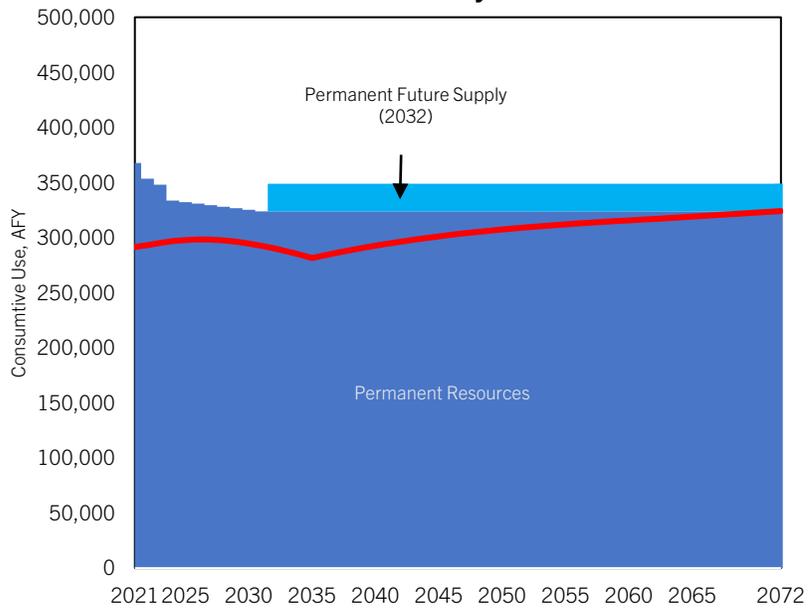
**Over the most recent 22-year period, there were nine years with inflows at or below 11.0 MAF.**



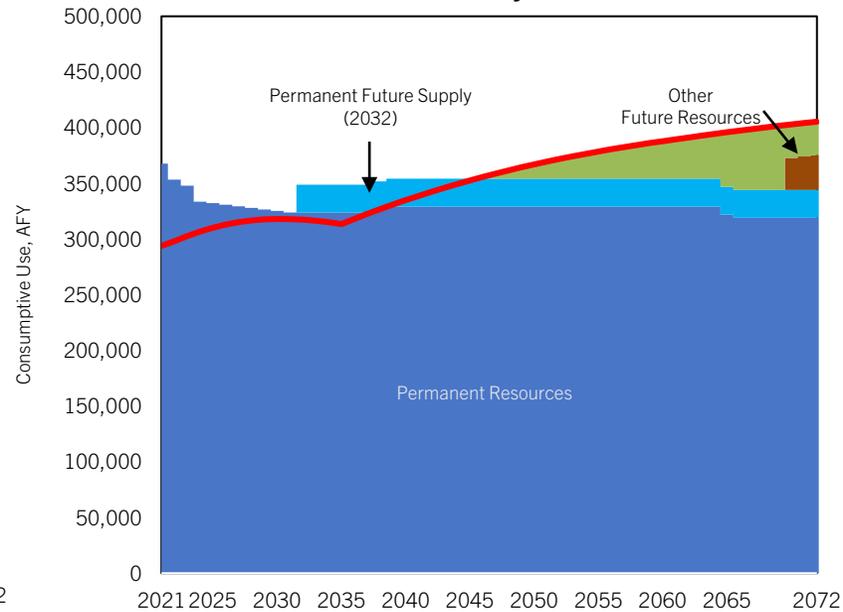
# RESOURCE PLANNING: 11.0 MAFY INFLOWS

## 11.0 MAFY Inflow Scenarios Proposed: 86 GPCD Conservation Goal

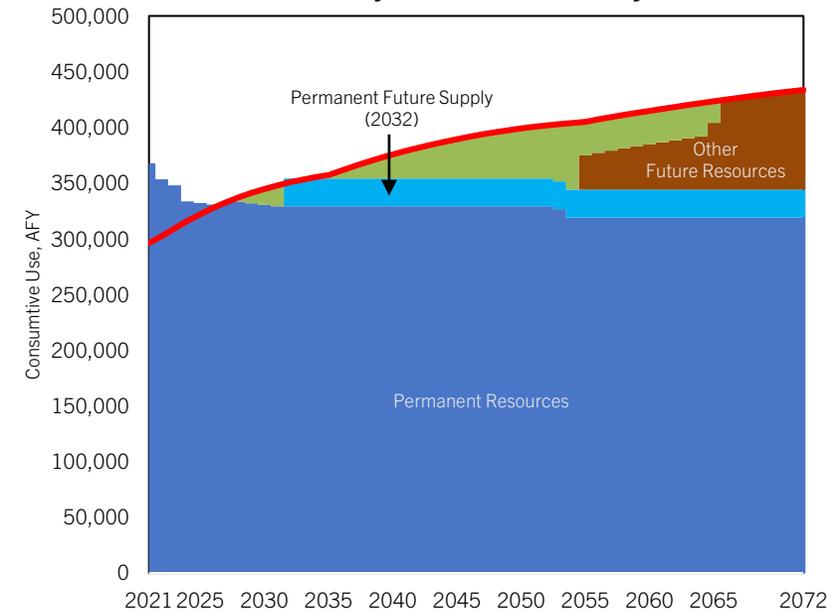
### Lower Demand (86 GPCD by 2035)



### Upper Demand (86 GPCD by 2035)



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



**Climate change will  
affect supply and  
demand.**



**Southern Nevada requires higher levels of efficiency:**

- **Address population growth**
- **Offset supply impacts due to shortage**
- **Reduce upward pressure from climate change**
- **Maximize the availability of existing water supplies**



**Additional actions are needed to address changing conditions.**



Landscape Efficiency



Cooling Efficiency



Water Loss Control



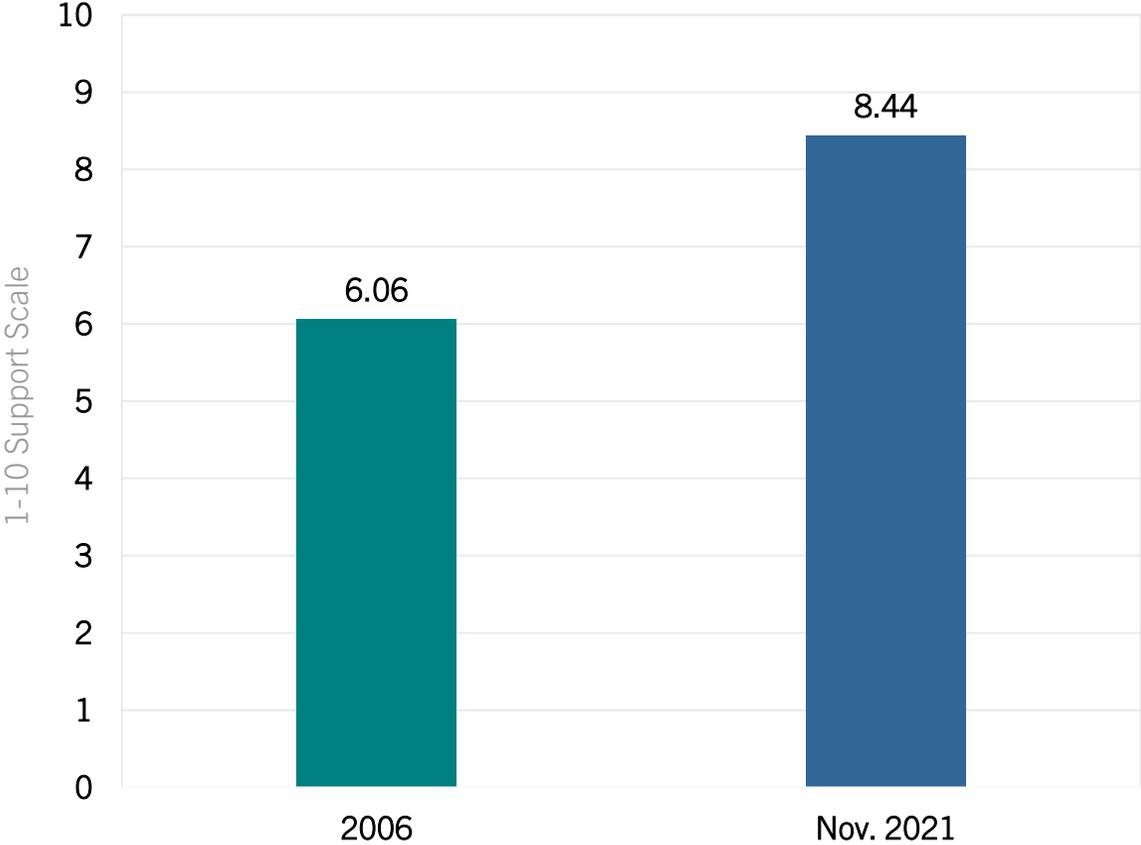
Irrigation Compliance



New Development Efficiency

**We know we have the community's support.**

Support for current water conservation measures



# APPROVED ACTION: NO NEW GOLF COURSES

**The Las Vegas Valley Water District will not provide municipal water service to new golf courses in its service area.**



# APPROVED ACTION: SEPTIC SYSTEMS

**When Colorado River water is delivered to a property with a septic system, water cannot be treated and reused again.**

**The Las Vegas Valley Water District will not provide municipal water service to properties with a septic system.**



# APPROVED ACTION: NONFUNCTIONAL TURF PROHIBITED

**A bill passed at the Nevada State Legislature prohibits Colorado River water from watering nonfunctional turf by 2027.**

- Single-family residential exempt
- 3,900 acres
- 9.5 billion gallons annual savings



Nonfunctional Turf: Medians, streetscapes, sloped grass, neighborhood entrances or other areas where grass cannot be safely accessed or efficiently used/managed.

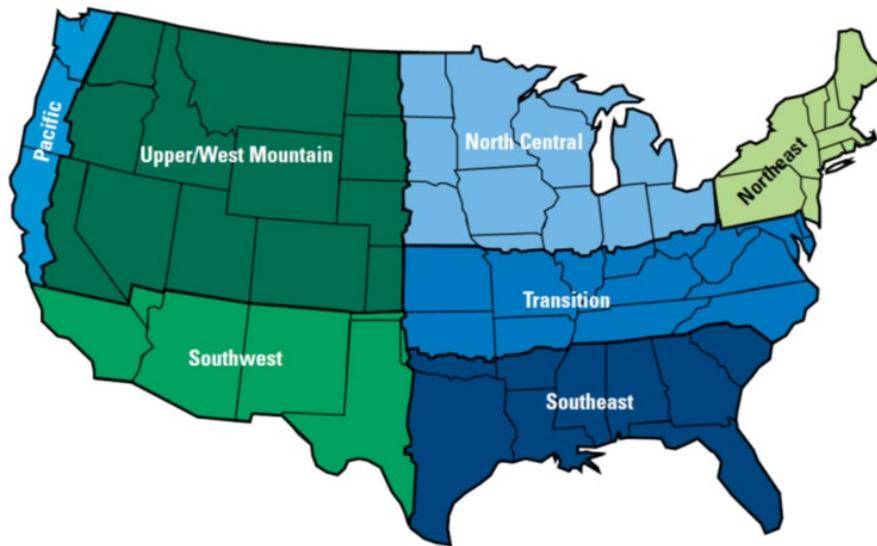
# PROPOSED ACTION: **LIMIT POOL SIZES**

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

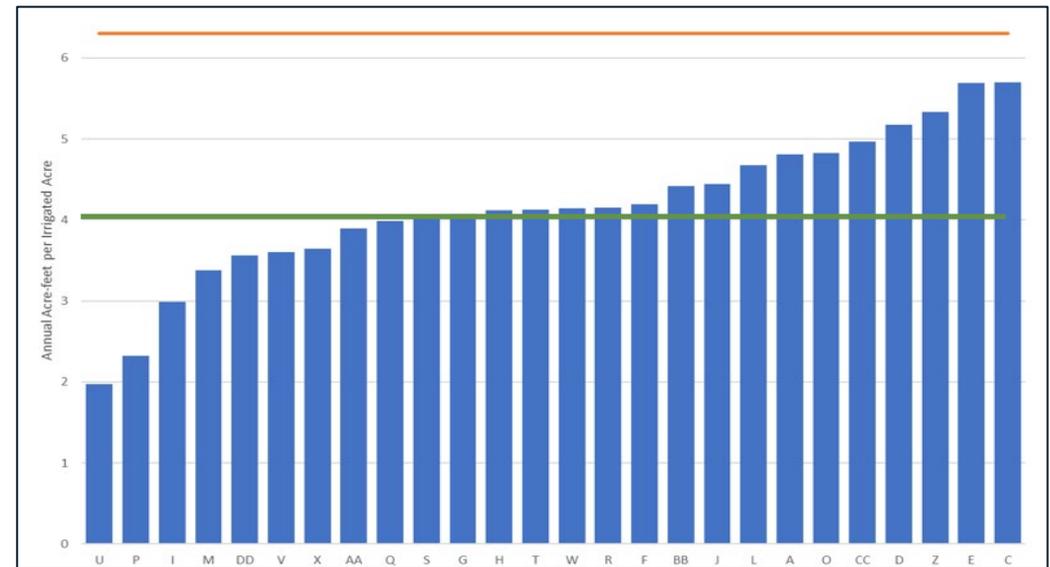


# PROPOSED ACTION: GOLF COURSE WATER BUDGETS

Reduce golf course water budgets to 4 acre-feet of water per irrigated acre.



The average Southwest course is using 4 acre-feet/acre.  
The average local course is using 4.1 acre-feet/acre.



— Current Budget (6.3 AF/Acre)      ■ Average 2016-2020 AF/Acre  
— Proposed Budget (4.0 AF/Acre)

# PROPOSED ACTION: **NO NEW TURF**

**Restrict the installation of turf in new development (except for parks and schools).**



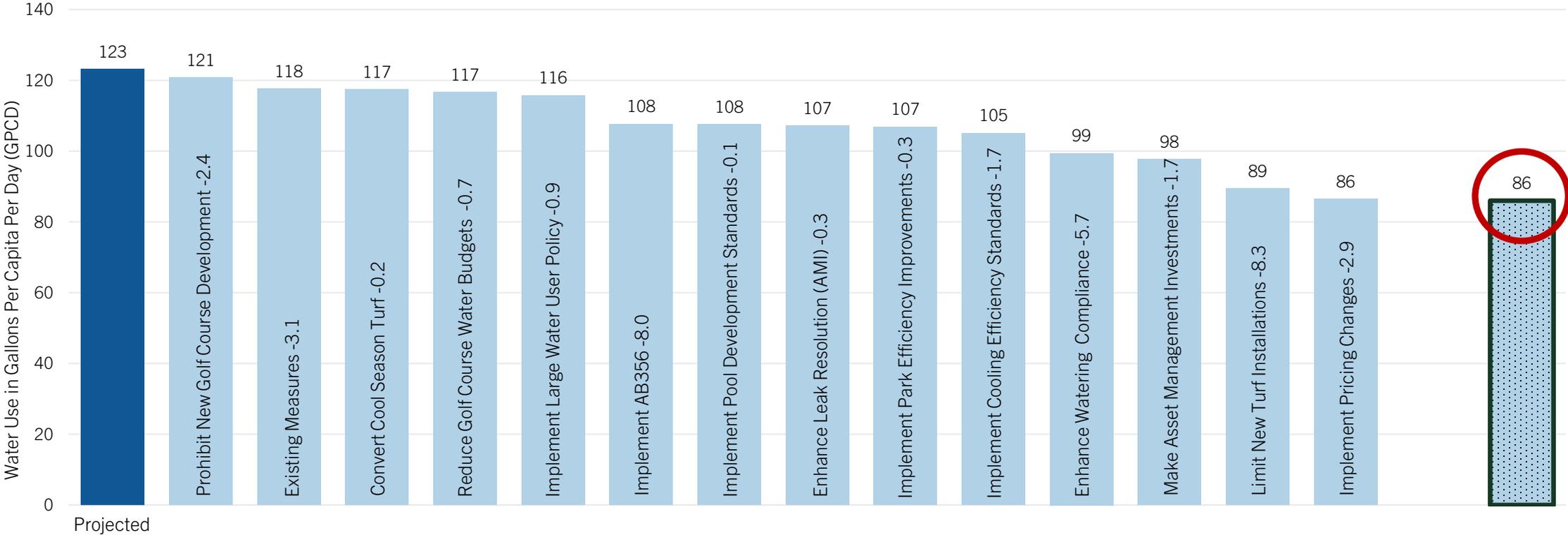
## PROPOSED ACTION: EVAPORATIVE COOLING MORATORIUM

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

**Alternative technologies must be used in new development.**



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





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