

Sustainable Water Systems

Drought, evaporation, pollution, and land use choices impact the quantity and quality of our water supply from the Colorado River and Lake Mead. Current and projected drought will limit the availability of safe drinking water, threatening public health, our economy, and the many systems that depend on water to operate. To ensure a sufficient water supply for our growing region, we must invest in and maintain efficient water systems, prevent pollution, and conserve water resources.

Connections to Climate Change

Research suggests that the Southern Nevada region will continue to experience more intense and longer drought conditions, fueled by hotter temperatures and a reduction in snowpack in states within the Colorado River Basin due to climate change. Lake Mead's water level has declined steadily since the early 2000s. As of June 2022, water levels were at 28% of normal capacity, the lowest since it was filled in the 1930s. Drought worsens water quality issues due to higher concentrations of nutrients or contaminants, which has implications for water treatment and natural ecosystems.

BY THE NUMBERS

52%

decrease in water use per person between 2002 and 2019, even while population has grown by 48%.[51]

under 5 inches

of precipitation on average in 2021 in Clark County.[52]

The state of Nevada's average is 10 inches per year, which earns Nevada the designation of driest state in the country.[53]

197 million

square feet of lawn converted to water smart landscapes with Southern Nevada Water Authority rebates since 1999.[54]

THE *ALL-IN* VISION

Conserving and protecting our water resources while developing sustainable systems for water delivery, stormwater management, and wastewater treatment.

Courtesy of Southern Nevada Water Authority

Leading by Example

Increasing Efficiency Through Non-Functional Turf Ban

Nevada enacted a law in 2021 prohibiting **Southern Nevada Water Authority (SNWA)** to deliver water to irrigate decorative grass in streetscapes, medians, parking lots, and other areas where it does not serve a functional purpose. The law aims to help businesses conserve nearly 10% of Southern Nevada's water supply and is estimated to save more than 9.5 billion gallons per year once fully enacted.

9.5 billion gallons

of water may be saved per year once Nevada's law is fully enacted.

ACTION PLAN

Sustainable Water Systems

The *All-In Community Plan* establishes goals, strategies, and actions for each focus area. These are highlighted in the summary matrix, along with indications of alignment with other regional and state plans.

			Alignment
Goal 1: Water supply is high quality and sustainable.			
1.1	**Protect and enhance the quality of Southern Nevada's water resources.**		
	1.1.A	Identify areas for targeted vegetation enhancement and restoration due to proximity to sensitive water resources.	
	1.1.B	Establish pilot projects to explore innovative technologies for removing pollutants from non-point source runoff.	
1.2	**Improve Southern Nevada's resilience to drought.**		
	1.2.A	Transition all public property to drought-resilient landscaping.	
	1.2.B	Establish an efficiency review policy and process for new, large water users that encourages efficient development and disincentivizes consumptive uses.	
	1.2.C	Expand existing guidebooks and training on incorporating drought tolerant green infrastructure onto existing properties.	
Goal 2: Southern Nevada is a national leader on water conservation and efficiency.			
2.1	**Reduce or eliminate consumptive water uses.**		
	2.1.A	Develop a program to transition industrial and commercial customers to efficient, dry cooling technologies.	
	2.1.B	Expand submetering and rates to comply with outdoor watering laws.	
2.2	**Require aggressive water conservation in new development.**		
	2.2.A	Develop and implement uniform regional performance standards to help local jurisdictions evaluate water demands of planned development.	
	2.2.B	Develop tools and guidance for developers to estimate water demand of proposed projects and report results to local jurisdictions.	
2.3	**Increase water conservation in existing buildings.**		
	2.3.A	Train and incentivize building tradespeople to identify and repair water leaks.	
	2.3.B	Identify barriers to and implement solutions for participation in SNWA's commercial and industrial Water Efficient Technologies program.	
Goal 3: Water and wastewater infrastructure is reliable, safe, resilient, and efficient.			
3.1	**Enhance resilience of the water system and alignment of regional policies.**		
	3.1.A	Align all jurisdictions' water policies and programs with existing studies and water resource plans.	
	3.1.B	Ensure power grid redundancy for water and wastewater transmission systems.	

Aligns with Southern Nevada Water Authority 2021 Water Resource Plan.

Pathway to Action

The *All-In* ***Climate Vulnerability Assessment*** identified opportunities to increase resilience of the region's water systems, including:

- Continuing to advance regional collaboration on water resiliency planning and management;
- Working with local agencies to integrate climate-related risks (e.g., projected water levels, water quality) into wastewater infrastructure design and maintenance plans; and
- Promoting conservation and preservation practices to protect and enhance water quality and maintain riparian and aquatic habitat connectivity.

"We go *All-In* by advocating and protecting endangered species such as the Moapa Dace fish!"

CLARK COUNTY RESIDENTS EMILY NELSON AND REBECCA GRIMM DESCRIBING HOW THEY'RE GOING *ALL-IN* TO PROTECT WATER QUALITY AND SOUTHERN NEVADA WILDLIFE

TRACKING PROGRESS

Monitoring these fundamental numbers will help demonstrate progress towards the goals.

METRIC	BASELINE	YEAR	2030 TARGET	2040 TARGET
Annual Water Consumption	123 gallons per capita per day (GCPD)[55]	2020	98*	86*
Southern Nevada's Consumptive Use of Colorado River Resources	256,000 acre-feet per year (AFY)	2020	225,000 AFY**	200,000 AFY**

* 2030 Water Consumption target is two-thirds of progress towards SNWA goal of 86 by 2035.

** Targets calculated based on % reduction between 2002 and 2020. Not targets set by SNWA.

Improved Tracking

Some actions in this plan cannot be monitored by metrics currently being tracked. Developing and monitoring additional metrics will improve knowledge of how actions are progressing.

Number of trained tradespeople in leak identification and repair.

Outdoor and commercial water consumption via submetering.

Number of plan review processes incorporating water use efficiency considerations.