

## Chapter 1 – Water Demands and Conservation Goals

For much of the past decade, Southern Nevada has been one of the fastest growing areas in the United States. Since 1991, the population served by purveyor members of the SNWA has almost doubled to over 1.6 million people. Because of this rapid and consistent growth, the SNWA Water Resource Plan is reviewed each year and amended as needed. As part of this annual review process, the UNLV Center for Business and Economic Research (CBER) generates a county population forecast for SNWA each year. The CBER population forecasts are integrated into an annual review of the water demands of SNWA purveyor members and the water resources available to meet projected demands.

Because conservation effectively provides an additional resource by freeing up water that was previously consumed inefficiently or wasted, the SNWA established a conservation program in the early 1990s to begin educating residents on water use and to reduce water demands in the community. More importantly, local purveyors implemented tiered pricing structures for water, which encourage conservation by charging higher rates as water use increases. Since that time, SNWA resource planning efforts have incorporated assumptions about water conservation as one element in the portfolio of resource options identified to meet Southern Nevada's water needs in the future.

In 1993, the estimate of conservation achieved through conservation programs, water related regulations and pricing was about 5%. In 1994, as part of a lengthy SNWA-sponsored public involvement process on integrated resource planning, a citizens advisory committee recommended that the SNWA establish a conservation goal of 10-15% by 2000. By 1996 – only two years later – this goal had been reached, with the community achieving an estimated 12% conservation. The rapid success of this achievement is attributed to changes in plumbing efficiencies, conservation programs and tiered water rates. Beginning in 1997, the SNWA Water Resource Plan incorporated a water use forecast that included the achievement of 25% conservation by the year 2010, using 1990 as a baseline. Since then, all SNWA long-term water demand forecasts have reflected this basic assumption as the basis for water resource planning.

Previous SNWA Water Resource Plans projected that 2002 would be the first year Southern Nevada fully utilized its 300,000 acre-foot Colorado River allocation to meet water demands by local purveyors. The 2002 consumptive use was projected to be approximately 310,000 acre-feet; however, this projection reflected conservation gains necessary to reach 25% conservation by 2010 – gains that were no longer occurring. The upward conservation trend of the 1990s had not continued, peaking in 1999 at about 17% and declining to a four-year low of 13.5% in 2001, as shown in Figure 1.

Given the higher demands and the fact that conservation results were lower than the levels expected, steps were taken in 2001 to improve demand management and to renew the community's commitment to conservation and smart water use.

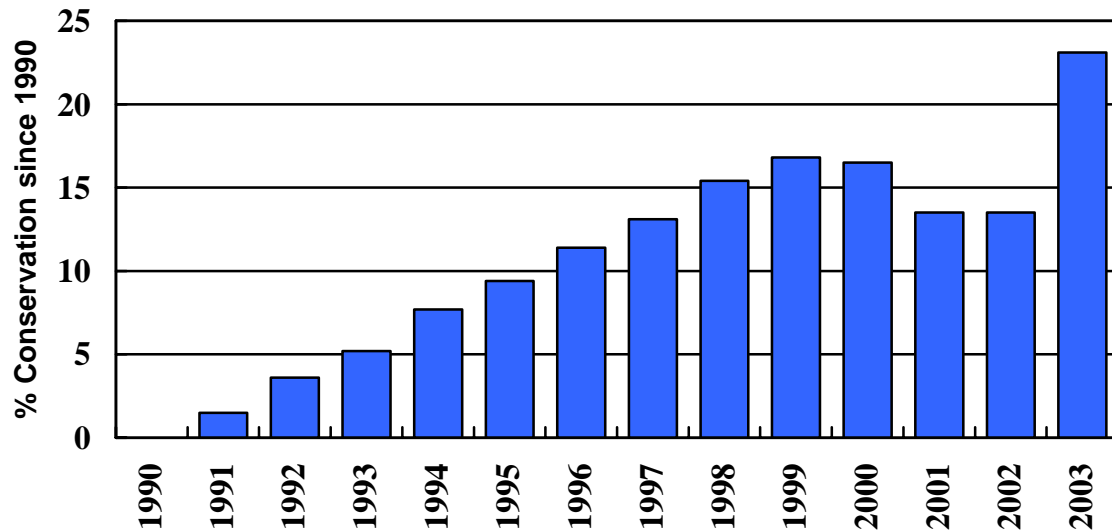


Figure 1. Conservation Achieved to Date

At that time, the SNWA and its member agencies committed to an ongoing conservation strategic planning process that would help ensure realization of the 25% conservation goal for 2010. The strategy and goals would focus on reductions in consumptive use of Colorado River water – the net amount of water we use each year and cannot get back through return-flow credits to use again to extend our water resources. This was a more aggressive conservation approach than existed previously, but was necessary to bring conservation back in line. To achieve these goals, the SNWA and its purveyor members focused on changing the outdoor water use habits of residents, since outdoor use accounts for the greatest consumption of water and the community will not receive significant resource benefits from reduced indoor use (which merely reduces deliveries from, and returns to, the Colorado River).

As the drought became more severe in late 2002, the strategic planning efforts of 2001 and early 2002 became the framework for drought response planning by SNWA and its member agencies, resulting in the SNWA Drought Plan. Following implementation of the Drought Plan and rate changes in 2003, a significant conservation gain was realized, effectively reversing the downward trend of 2000 to 2002. As Figure 1 shows, Southern Nevada achieved 23.1% conservation in 2003 and is now expected to surpass the 2010 goal of 25% conservation as early as 2004.

In addition to this emphasis on renewed conservation and drought response, the SNWA began taking steps to accelerate the development of in-state water resources. As part of this effort, the SNWA launched an integrated water planning process in 2004, one element of which is an Integrated Water Planning Advisory Committee (IWPAC). The IWPAC will be considering new conservation goals for Southern Nevada as it develops

recommendations on how best to integrate in-state water resources into the ongoing water planning and management activities of the SNWA. This integrated water planning effort is expected to continue well into 2005.