

SECTION ONE

INTRODUCTION

This is the first update to *Water Plan: 2000-2050*, and it provides the City of Tucson's Mayor & Council with a renewed view of the community's water-resource future. The City of Tucson Water Department (Tucson Water) issued *Water Plan: 2000-2050* in 2004 to initiate a dialogue between the Utility and the community about the water-resource challenges which needed to be addressed in the coming years. Since that time, the substantive issues and challenges remain largely the same; however, the planning timeframes within which to address them have changed. In addition, planning assumptions and priorities have evolved and revised population and water demand projections have been developed.

Both *Water Plan: 2000-2050* and this update clearly demonstrate that the community served by Tucson Water has the water resources available to provide a long-term, sustainable water supply. This supply is sufficient not only for Tucson Water's current residents but also for those who are projected to come in the next few decades. Tucson Water's rate payers have already invested in developing the Utility's water-resource portfolio and its extensive water distribution systems. Many of the community's water-resource challenges involve increasing system reliability and securing sustainable water supplies for additional growth in the decades beyond.

The extent and timing of future growth in areas to be served by Tucson Water directly relate to land-use issues currently being discussed by planning authorities in the region. The recommendations in *Water Plan: 2000-2050* and this update provide the Utility with the necessary flexibility to accommodate future land-use decisions while ensuring a safe and sustainable water supply for Tucson Water's existing and future customers.

This update relies on *Water Plan: 2000-2050* as its primary source document; it serves as Tucson Water's most recent comprehensive revision to its long-range water resources plan. *Water Plan: 2000-2050* has received wide recognition as a significant accomplishment in water-resources planning and has become a resource document and model for others. It was predicated on a Scenario Planning approach which addresses the critical uncertainties that can affect the community's water future; the result is greater program viability and planning flexibility. *Water Plan: 2000-2050* was developed with the following resource-management goals:

- Meet Projected Total Water Demand.
- Maximize Use of Renewable Water Resources.

- Meet Water-Quality Targets.
- Achieve Sustainable Ground-Water Pumpage.
- Manage Costs and Water Rate Impacts.
- Comply with Assured Water Supply (AWS) Program.

Both *Water Plan: 2000-2050* and this update emphasize the need for Tucson Water to continue pursuing three general initiatives in order to effectively address the growing community's water-resource issues and challenges:

1. Utilize fully the renewable water resources it currently has available;
2. Achieve more efficient water use through expanded conservation programming or demand management;
3. Acquire additional water supplies to increase reliability and meet future demand.

The Utility's ability to implement these initiatives requires decision makers to address critical decisions at key points in time. These decisions will in turn ensure the timely implementation of projects and programs which will guarantee the long-term sustainability of the community's water resources.

This update highlights several developments and changes which have occurred since *Water Plan: 2000-2050* was issued in 2004. One significant change is that new population projections through 2030 have been developed that directly influence projected water demand and resource utilization. Another is the inclusion of an analysis which assesses the sensitivity of projected water demand to potential changes in the size of the area to be served and to the potential implementation of more aggressive demand management measures. The third is the possibility that the Secretary of the Interior may declare a shortage on the Colorado River sooner than previously projected. The fourth is the need to further assess the community's preference regarding the long-term mineral content of the Colorado River water/ground-water blend to provide a final recommendation to Mayor & Council in 2008. Fifth and finally, greater recognition is given to the potential long-term impact that climate change may have on the Utility's available water resources and the community's demand for water.

Many of these and other developments have been discussed over time with the City Manager's Office, the City of Tucson's Citizens' Water Advisory Committee (CWAC), the Environment, Planning and Resource Management (EPRM) Subcommittee of Mayor & Council, and the City of Tucson Mayor & Council. This update summarizes the substance of these previous communications and provides additional information about the evolving resource planning environment.

The update consists of seven sections. The first five sections document the support information used to update the recommended resource-utilization plan. Section Two

summarizes revised projections of Tucson Water’s potential service area populations through 2050. Section Three discusses the impact that these revised population projections and potential demand-management initiatives can have on projected water demand. Section Four reviews Tucson Water’s available water resources with emphasis given to the future availability of the City of Tucson’s Central Arizona Project (CAP) allocation and the current status of the City of Tucson’s Assured Water Supply (AWS) designation. Section Five reviews the needs of Tucson Water’s potable and reclaimed water systems to convey water supplies within its service area to meet demand as well as potential cooperative opportunities to wheel the water resources of other local water providers.

The last two sections present the latest revisions to the recommended resource-utilization plan and update the conclusions provided in *Water Plan: 2000-2050*. Section Six refocuses Tucson Water’s resource-utilization and system plan noting progress in implementing many of the previously identified common project/program elements and the results of the expanded public outreach regarding *Water Plan: 2000-2050*. Special emphasis is given to outreach efforts conducted to elicit customer preference regarding the long-term mineral content of the Colorado River water/ground-water blend. Section Seven provides an update on the key recommendations of the plan, summarizes the substantive conclusions of this update, and discusses what may lie beyond the fifty-year planning horizon. The Appendices (A through E) present more detailed information on specific issues discussed in this Update.

