SOUTHERN NEVADA
WATER AUTHORITY

Drought Plan

April 2007

This document is a supplement to the SNWA Water Resource Plan.

Table of Contents

This page has been intentionally left blank.

Preface to the January 2005 Drought Plan Revision

The Southern Nevada Water Authority (SNWA) Drought Plan was developed in 2002 and adopted by the SNWA Board of Directors on February 20, 2003 in response to severe drought conditions affecting the Colorado River Basin. The plan identifies drought response measures that can be taken by the community to reduce water demands during times of drought. These measures are intended to spread the burden of drought response as much as possible across all sectors of the community, while targeting those water uses with the greatest potential for water savings.

Following adoption of the plan, drought response measures were implemented by SNWA member agencies and Clark County. Since that time, the SNWA and its member agencies have regularly reviewed the plan's concepts and tactics, working with the public to enhance them where appropriate. As part of this process, the Drought Plan was first amended in February 2004 to reflect changes to Drought Alert restrictions, as well as general changes resulting from the 2004 revision of the SNWA Water Resource Plan.

The January 2005 revision is intended to clarify the overall process for declaring drought stages and to resolve potential conflicts between the original sequence of drought stages and the emergency authorities of local or state government, while maintaining sufficient flexibility for the SNWA and its member agencies to address worsening drought conditions, if they occur. To accomplish this, direct linkage of drought stage declarations to Lake Mead water levels has been eliminated and the Drought Emergency stage is being replaced with a Drought Critical stage. To determine whether or not to declare a particular drought stage, including Drought Critical, the SNWA Board will still consider the Bureau of Reclamation's Lake Mead water level projections, but in conjunction with the community's conservation achievements, projected water demands and other related factors.

This revision specifies golf course water budgets and surcharges during Drought Alert, as well as increased penalties for water waste during Drought Alert for all customers. It also reflects changes to fountain restrictions. The plan has also been revised to reflect the latest information on conservation, drought conditions and water supply conditions.

As Southern Nevada addresses the many challenges posed by drought in the Colorado River Basin, the SNWA will continue to review its Drought Plan regularly to ensure the plan reflects current conditions and levels of action required. Reducing Southern Nevada's vulnerability to drought requires a concerted, sustained effort by the entire community. This plan and its associated measures remain one part of that effort.

This page has been intentionally left blank.

Introduction

The Southern Nevada Water Authority (SNWA) was formed in 1991 by a cooperative agreement among seven water and wastewater agencies in Southern Nevada:

- Big Bend Water District
- City of Boulder City
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County Water Reclamation District
- Las Vegas Valley Water District

Collectively, these agencies provide water and wastewater services to Las Vegas, North Las Vegas, Henderson, Boulder City, Laughlin and portions of unincorporated Clark County. The SNWA is the wholesale water provider to the municipal water agencies in Southern Nevada. In addition to its wholesale treatment and delivery responsibilities, the SNWA acquires and manages long-term water resources for Southern Nevada. From its inception, the SNWA mission has been to seek new water resources for Southern Nevada, manage existing and future water resources, construct and manage regional water facilities, and promote responsible conservation. To support this work, the SNWA maintains several key planning documents, including a water resource plan that is reviewed annually and updated as needed.

The SNWA Water Resource Plan provides a comprehensive overview of water resources and demands in Southern Nevada, including a discussion of the critical role conservation plays in SNWA demand forecasts and in efforts to meet future water demands. As noted in the plan, groundwater and Colorado River water are two basic resources used to meet water demands, but conservation is a third resource that is critical to managing and extending those resources over time. Because conservation effectively provides an additional resource by freeing up water that was previously consumed inefficiently or wasted, the SNWA Water Resource Plan incorporates assumptions about water conservation as one element in its portfolio of resource options intended to meet Southern Nevada's water needs in the future.

To sustain and promote conservation goals in Southern Nevada, the SNWA and its member agencies launched a conservation strategic-planning process in 2001. This process brought together decision makers within the community to coordinate strategies, brainstorm ideas and identify future opportunities to involve stakeholders in crafting and implementing additional sustainable conservation for the Las Vegas Valley. However, as drought conditions in the Colorado River Basin became more severe, the SNWA member agencies recognized that a more immediate and actionable community response was necessary. As a result, the conservation strategic planning effort evolved in 2002 to address drought conditions specifically. This effort ultimately provided the framework for development of the SNWA Drought Plan.

While historically the SNWA has relied on conservation to help meet the water needs of Southern Nevada, additional demand reduction became necessary when confronted with the drought conditions currently affecting the Colorado River Basin. To this end, the SNWA developed the Drought Plan as a supplement to the SNWA Water Resource Plan. Although the SNWA continues to develop a portfolio of resource options to meet future demands, the additional conservation measures outlined in this plan are integral to mitigating the impacts of drought on current water supplies**.**

In 2002, the SNWA anticipated that supplies above and beyond Nevada's 300,000 acre-feet per year apportionment of Colorado River water would be provided by interim surplus water through 2016. Interim Surplus Guidelines were forged in 2001 as part of a 15-year plan to allow California to gradually reduce its Colorado River consumption (about 5.3 million acre-feet per year as recently as 2002 with a 4.4 million acre-feet per year apportionment). The guidelines allow Arizona, California and Nevada to take additional water from the Colorado River for domestic uses through 2016, provided there is adequate storage in Lake Mead for the Secretary of the Interior to make surplus designations.

Under the Interim Surplus Guidelines, the Secretary may declare a full surplus, partial surplus or "normal" operating condition depending upon Lake Mead reservoir levels. Under a full surplus declaration (lake level above 1,145 feet sea level), Nevada can take as much water as needed to meet municipal and industrial uses. Under a partial surplus declaration (lake level between 1,125 and 1,145 feet sea level), Nevada can take just half of the water needed in excess of Nevada's standing apportionment. Under a "normal" operating condition (lake level 1,125 feet sea level, or less), Nevada can only take its basic 300,000 acre-feet consumptive apportionment.

The inability of California water agencies to approve various quantification agreements by the end of 2002 precluded implementation of the Interim Surplus Guidelines for much of 2003. The guidelines were eventually reinstated when California approved the agreements in October 2003. However, by that time, the ongoing drought in the Colorado River Basin had reduced the probabilities that interim surplus water would be available to Arizona, California and Nevada under the guidelines. In response, the SNWA continued to emphasize the drought response and conservation measures outlined in the Drought Plan, and took steps to accelerate the development of additional in-state, non-Colorado River resources within the SNWA resource portfolio.

By the end of 2004, the sustained drought had resulted in Lake Mead falling low enough for the Bureau of Reclamation to recommend the declaration of a "normal" operating condition as part of its Annual Operating Plan for 2005; as a result, Nevada will be required to operate within its basic apportionment. If water levels in Lake Mead fall low enough in the future, shortages are also a possibility. In a shortage situation, the Lower Basin states will be required to take less than their basic apportionments. In either case, Southern Nevada will have to make up any shortfalls in its previously anticipated (for example, interim surplus) Colorado River supply with increased levels of conservation

and drought response, SNWA banked water reserves and in-state resources, when available.

In developing drought response measures, the SNWA adhered to the following basic principles:

1. Avoid restricting non-consumptive uses unnecessarily; that is, any process that returns water to the sanitary sewer for treatment and reuse or return-flow credit.

2. Avoid tactics that are likely to have substantial impacts on the community's economic interests (that is, preserve jobs).

3. Focus on reducing consumptive use (the net amount of water we use each year and cannot get back through return-flow credit to use again).

4. Focus on reducing non-essential uses and waste.

5. Provide reasonable opportunities for large consumptive water users to determine their own operational strategies within a water budget.

6. Consider the positive public perception of limiting highly visible uses of water even if they produce nominal efficiency gains.

7. Consider the impact of perceived equity among various sectors' contributions to conservation.

8. Provide special emphasis on the need for extraordinary, visible leadership from government-sector water users.

9. Acknowledge the need for further participation in the development of this plan from sectors that will be significantly impacted.

The Drought Plan is intended to assist residents, businesses and SNWA member agencies in meeting the challenges associated with the drought. To that end, Chapter 4 describes specific measures to reduce water demands and promote smart water use. The measures, which include stronger water waste enforcement, more comprehensive water use restrictions, and the use of water budgeting or similar techniques, are also outlined in a matrix at the end of this document. These measures apply to all qualities of water such as recycled, reclaimed, raw or potable water.