

## **Project Number**

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## **The Salinity Management Guide**

### **Principal Investigator:**

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### **Cash Contributors (in addition to the Bureau of Reclamation):**

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Los Angeles Department of Water and Power

Water Replenishment District of Southern California

City of Cerritos

West Basin Municipal Water District

### **Objective:**

To address salt management issues specific to the use of recycled water in irrigation of landscape and provide appropriate management techniques through a detailed literature review, production of an electronic Salt Management Guide CD, and creation of an educational brochure.

### **Summary:**

This new tool is available to help landscape professionals accurately diagnose and manage salt-related problems.

For over 100 years, California has been using recycled water in a variety of ways. The California Department of Water Resources estimates that of the 525,000 acre-feet of recycled water used annually in the state, approximately 21 percent is used for landscape irrigation. Recycled water typically is of higher salinity than freshwater but usually not high enough, however, to make it unsuitable for irrigation. Because residential and commercial uses add salts to wastewater, increases in salinity levels of local recycled waters vary from under 400 to 900 ppm. Sometimes, however, high levels of salinity originate with the source water itself and not the recycling process. For example, much of Southern California receives imported Colorado River water for drinking-water purposes. The Colorado River's salinity level averages about 750 ppm – high enough that, in some situations, it may be detrimental to certain salt sensitive plants.

Salinity levels in groundwater, another source of potable water, can also vary, ranging from 200 ppm to as high as 10,000 ppm. Thus, whether you use drinking water or recycled water for irrigation, you may end up with salt damage (especially with foliar wetting) to sensitive plants, such as rose, gardenia, and ginkgo tree.

The *Salinity Management Guide* is an interactive, user friendly CD that provides information varying from the basics of salinity to the design or redesign of landscape systems based on water needs, soil conditions, and the salt-tolerance of plants. Using data and images from the Guide, landscapers will be able to compare their plants to photos of plants suffering from salt damage. With a click of the mouse, they can explore options such as selecting a more salt-tolerant plant for the landscape, checking water application rates to determine if adequate water has been used to meet the plant's needs, or changing the water application method from one type of sprinkler to another to avoid salt damage to foliage.