

# **AWWA CA/NV SECTION WATER CONSERVATION TRAINING AND CERTIFICATION PROGRAM “NEED TO KNOW” CRITERIA FOR LEVEL 1**

The “Need to Know” criteria” presented below is based upon the general knowledge requirements expected for level 1 AWWA CA/NV water conservation certification and focuses on water end uses and conservation measures and on regional water issues and resources.

**Terms and definitions associated with the subjects discussed below.**

**Units of measurement and formulas.**

Basic units (English) of measurement used in the water industry and formulas for landscape water use and budgets. Examples are Cubic Foot and Acre Foot, Arithmetic such as Multiplication Division and percentages, volume, pressure (psi).

**U.S. Water Resource Facts; Federal, Nevada and California Water Providers and Regulators; Regional water issues; Professional associations.**

Different types of water providers in U.S. and primary source of water for average U.S. water providers. Knowledge of water supply from groundwater and surface water in California and Nevada. Agricultural and urban demand in California and Nevada. Sources of water in California. Sources of water for Nevada Colorado River water rights; Type of water agencies in California. Roles of Federal Nevada and California water agencies and regulators. Agricultural and urban MOU and Best Management Practices; Urban Water Management Plans; California water issues including CALFED and Bay-Delta; and professional associations (including California Urban Water Council, ANSI and ASME).

**Utility water demand characteristics and water conservation measures.**

Important utility water use data and customer demand characteristics; long-term versus short-term conservation programs; utility conservation measures; type and accuracy of water meters; quantity-based rate structures; unaccounted-for water; water system audits and leak detection; system water pressure: and recycled water.

**Residential end use and indoor water conservation measures.**

Residential indoor end uses for fixtures and appliances. Use rates of conventional and water saving fixtures/appliances. California, Nevada and National Plumbing Standards. U.S. Energy policy Act of 1992; residential indoor water conservation measures; toilet operation and hardware; source of toilet leaks; toilet dye test; toilet flush volume measurement; methods to determine shower and faucet flow rates; and meter leak detection test, flow rate standard for interior faucets, indoor water loss, audits.

**Landscape measures / Graywater**

Xeriscape principles and problems. Factors and calculations determining landscape water use Factors such as irrigation efficiency; distribution uniformity; landscape water budgets; soil, water and plant relationships (evapotranspiration), grasses, sprinklers; hardware comprising an efficient irrigation system; controller water saving features; and other outdoor water conservation measures. Graywater sources, water quality issues, system design, costs and water savings.

## **Commercial, industrial, and institutional uses and measures.**

CII business classification codes; CII heat transfer processes; CII treatment/water purification; CII BMP; CII conservation opportunities; and utility offered CII water conservation programs (Standard Industrial Classification codes (SIC), cooling towers

Reclaimed water