

# This presentation premiered at WaterSmart Innovations

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# Training and Certifying the Conservation Troops: Experience from the Trenches of California-Nevada Section AWWA

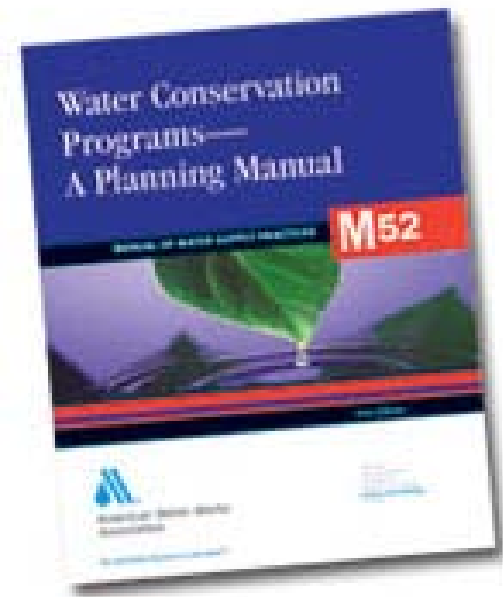


Lisa Maddaus, PE, Brown and Caldwell  
Linda Higgins, Regional Water Authority



# Presentation Overview

- Mission and history
- Overall program structure
- Certification
  - Overview
- Training
  - Overview
  - Benefits
  - Challenges with training

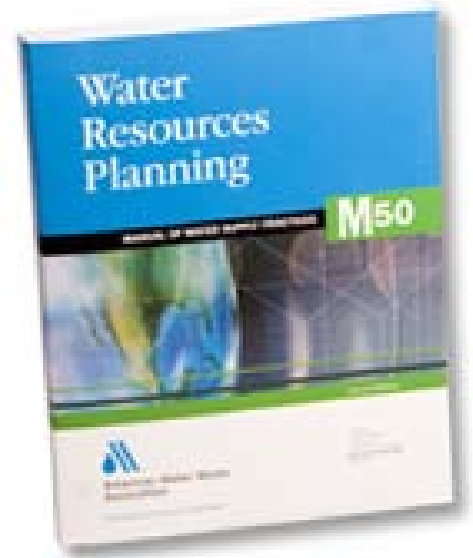


# AWWA California-Nevada Section's Mission and History with Conservation

- Largest section of the American Water Works Association comprised of:
  - 7,000 drinking water professionals
  - Governed by a executive committee and governing board
  - 55 committees
- CA-NV AWWA founded the Water College. Water College is:
  - IACET Authorized Provider offering full college-level coursework in water curriculum
  - Focused on making water education accessible to everyone in the drinking water profession.

# History of the Water Conservation Practitioner Program

- Water Conservation Committee of CA-NV AWWA
- Started Grade 1 in 1993
- Grade 1 certification only from 1993-2008
- 2007 overhauled Grade 1 and expanded Grades 2 and 3
- 2009 renamed Certification program to Water Use Efficiency Certification Grade 1 – 3



# Water Conservation Certification

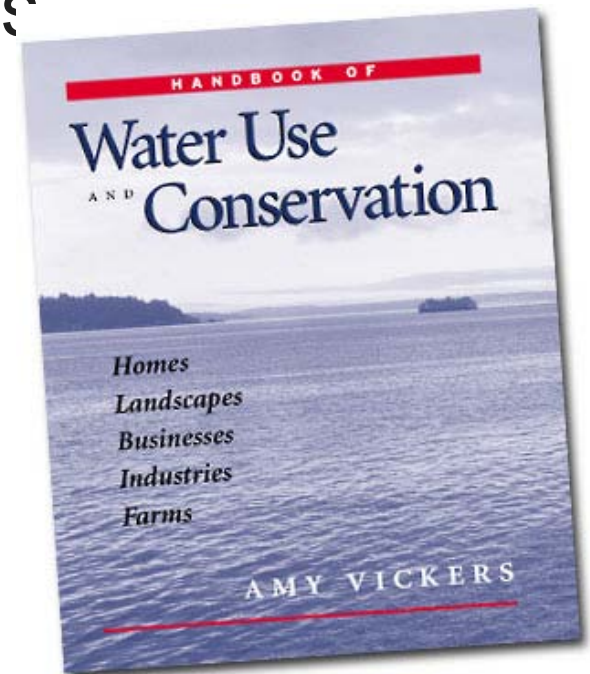
## Collaborating Partners

- **\$100,000 donated by the following agencies to support Water Conservation Certification program:**
  - Environmental Protection Agency
  - Association California Water Agencies
  - California Department of Water Resources
  - U.S. Bureau of Reclamation
  - Sacramento Regional Water Authority/Water Forum
  - Southern Nevada Water Authority
  - Western Regional Water Commission

# Overview of New Structure for the Water Conservation Practitioner Program

## Grade 1 - Base level of knowledge:

- Verifying conceptual understanding of water conservation (e.g. fixture flow rates)
- Implementation techniques
- Conducting customer surveys





# New Structure (con't)

## **Grade 2** - Intermediary level of knowledge:

- Setting conservation project goals, budgets and staffing resources
- Understanding concepts of how to evaluate cost effectiveness
- Water rates
- Landscape water budgets





# New Structure (con't)

## **Grade 3 - Advanced level of knowledge:**

- Assessing conservation potential
- Monitoring and post evaluating savings
- Technical and policy support for land and water use planning
- Setting water demand management priorities in respect to other water supply alternatives
- Overseeing overall conservation program budgets and staffing resources

# Duties of the Certification Committee

- Define the “Need to Know” criteria
- Develop reference list
- Generate exam questions
- Sworn to secrecy
- On-going support for exam evaluations



# Members of the AWWA Certification Committee

- Angela Anderson, Ca Urban Water Conservation Council
- Cathleen Brennan, Coastside Water District
- Francie Kennedy, City of San Juan Capistrano
- Linda Higgins, Regional Water Authority
- Tom Hawes, Water Audit Corp
- Scott Harris, Las Virgenes Municipal Water District
- William Granger, Otay Water District

# Post Analysis of Exam

- Evaluation of passage rates
- Questions with low passage
- Review exam after first 100 exams
- Reviewing written feedback from examinees
- Create additional questions



# Number Professionals Certified as of August 2010

Total current certified: 536

- Grade 1: 501
- Grade 2: 35
- Grade 3 is available and the “Need to Know” criteria is on the CA-NV AWWA website
- Don't have anyone requesting to test at the Grade 3 level yet.

# Training Program Re-launch

- Grade 1 November 2008
- Grade 2 March 2009
- Grade 3 still pending
- Courses offered quarterly or by request of sponsoring agency
- Goal:
  - Help with exam prep to take headache out of testing
  - Covering all the “Need to Know” Criteria for each appropriate grade

# Training Format

- 2-Day workshop format
- Designed around the “Need to Know” criteria
- Handbook with rules, glossary, presentation slides, examples, sample quizzes and word problems, unit conversion sheet from exam
- Current instructor: Lisa Maddaus
  - B.S. and M.S. in Civil Engineering
  - 15 years in water resources, droug and conservation planning
  - Certified Grade 1 and 2
  - Teaching courses since 2008





# Experience with Training Classes

- Large surge in the beginning
- Attendees come for one of a few reasons:
  - Exam preparation
  - General industry knowledge
  - Needed CEUs for water distribution or treatment certifications
  - All of the above
- Class for Grade 1 range of knowledge varies widely from completely new to seasoned veterans looking to get certified at higher levels.

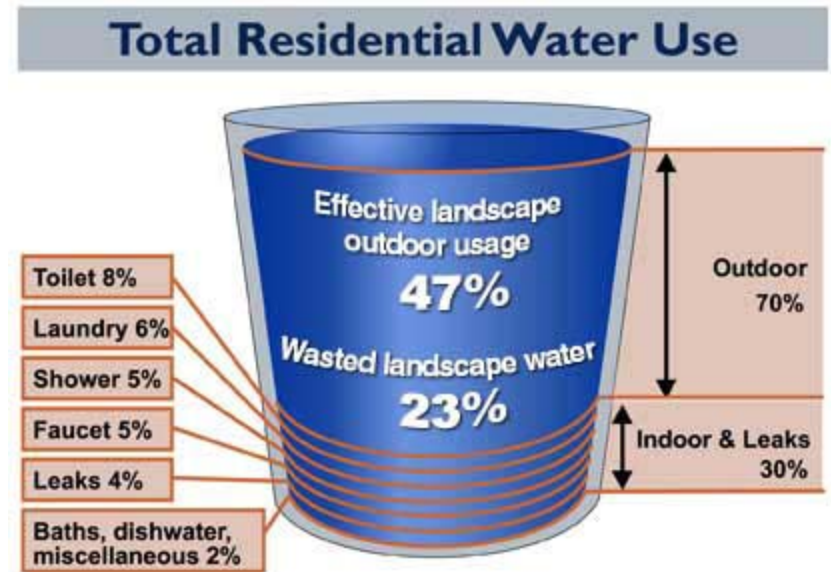
# Number of Attendees for CA NV AWWA Courses

- For 2008:
  - 87 total Grade 1
- For 2009:
  - 109 total Grade 1
  - 47 total Grade 2
- For 2010:
  - 64 total Grade 1
  - 33 total Grade 2

# Lessons Learned from Training

- Important to attendees instructor take exam
- Beholden to not “teach to the test”
- Engage and plan for lots of dialogue
- Teaching to “fish” is important
- Use internet with handout of sites for future reference

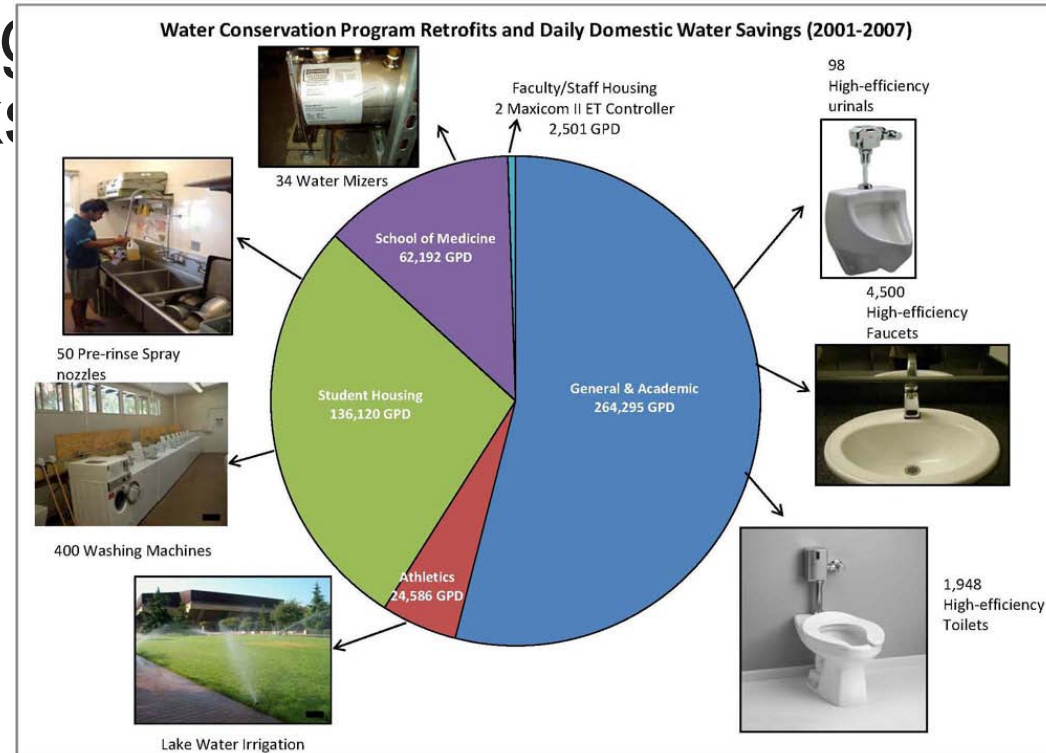
Example graphic from Southern Nevada Water Authority used in training materials with full crediting to sources



# Training Lessons Learned (con't)

- More word problems and examples the better
- Great examples come from seasoned attendees in the class
- Continuously updating material and web links

Example savings from Stanford University conservation efforts



# Questions and Discussion



Thank you