

Water Softener Sustainability  
Professional/Arizona  
(WSSP-A)  
Certificate Program

Module 4  
Installation and Maintenance

Arizona Water Quality Association

# Continuing Education for Customers

- ✓ users and installers need to know the best ways to mount and operate equipment
- ✓ important that staff be well versed on environmental realities



# Continuing Education for Customers

- ✓ **encourage** purchase of **efficiency rated** water softener: DIR (demand initiated regeneration) softener
- ✓ **explain** available technological improvements to achieve **higher efficiencies...**
  - **Twin Alternating Tank:** allow for one tank to be in service while the other regenerates, therefore, the full capacity of the resin can be used
  - **Proportional Brining:** a concept where they system will control the salt and water used during regeneration to the specific capacity of the resin that was exhausted
  - **Sensor Technology:** triggers regeneration by measuring the quality of the product water

The primary purpose of the WSSP-A program is to demonstrate to possible customers that you have the knowledge to understand and understanding to help them make good choices.



# Proper Installation

- ✓ install in a way that **maximizes efficiency**
- ✓ **check and follow** any applicable plumbing codes and ordinances
- ✓ **must comply** with all state and local laws and regulations



# Proper Installation

- ✓ ask the customer about the **intended use** for any water
- ✓ consider **sizing** to install equipment appropriately
- ✓ remember to **use a nearby drain** that can handle the rated drain flow
- ✓ **check the appropriate code** for requirement of an anti-siphon device or air gap on the drain line



# Best Operating Practices



Don't install a product and simply leave behind an instruction manual. The owner needs to know operation and regeneration basics.

Why bags of salt are necessary:

- ✓ creates a brine solution, which **recharges** the resin beds
- ✓ control valve on the softener **regulates how & when** brine is created

Homeowner should feel comfortable with the operation of their system.



# Best Operating Practices

The installers or repair technician should help the owner determine the best settings

- ✓ assume an average person uses **70 - 75 gallons** of water per day
- ✓ **hardness** level must be **measured**



# Best Operating Practices

- ✓ familiarize the owner with the concepts of **grains per gallon**
- ✓ after hardness has been tested, **explain the results** to the customer
- ✓ **recommended** to set all softeners to remove a minimum of 3,350 grains of hardness per 1 lb. of salt while using no more than 5 gallons of water per 1,000 grains in regeneration





# Best Operating Practices

- ✓ make sure customer understands settings should be occasionally revisited to **achieve the ideal level of softness and efficiency**
- ✓ encourage use of **vacation settings** to **avoid needless regeneration**



# Explaining the Role of Softeners



- ✓ staff should be knowledgeable about the purposes of softeners to **educate without scaring** buyers away from fully utilizing the products
- ✓ **provide physical examples** of objects that were subjected to un-softened water
- ✓ encourage homeowners to see their softener as an **enabling technology**



# Explaining the Role of Softeners

## **Water Softening Benefits:**

- ✓ better shampoo lather, less spots on dishes, and reducing film on shower walls
- ✓ softened water helps protect showerheads & faucets from reduced water flow
- ✓ dishwashers and clothes washers remain free from scale build up



# Explaining the Role of Softeners

## **Water Softening Benefits** *continued:*

- ✓ use less detergent in your wash machine and a colder water setting
- ✓ softened water can mean cutting dish detergent by up to 70%
- ✓ water heaters will last longer and remain efficient



# Explaining the Role of Softeners

For more information and to learn about the independent studies that have shown many of these facts, homeowners should visit **wqa.org** and look for *“Benefits of Good Water Quality.”*





# Talking in the Home About the Environment

Certified professionals speaking with some passion can have a strong impact on consumer decisions.



# Talking in the Home About the Environment

A few points:

- ✓ sources of drinkable water have become **limited** over the years
- ✓ salinity is a **measurable problem** in many areas as it enters the soil
- ✓ salinity **stresses** plants and crops, and decreases productivity
- ✓ proper settings and **high efficiency devices** are important



# Review

- ✓ **proper sizing and application** is the 1<sup>st</sup> step
- ✓ **proper installation** is crucial
- ✓ studying **relevant** codes and statues
- ✓ determining softened water **usage**
- ✓ owner needs to understand the best way to set their softener for **maximum efficiency**
- ✓ installer or service technician can talk about the **positive aspects** of softeners and the importance of **protecting the environment**





# Learn More

- ✓ **Arizona Water Quality Association** - <http://azwqa.org>
- ✓ **Water Quality Association** - <http://wqa.org>
- ✓ **CASS study** - <http://www.usbr.gov/lc/phoenix/programs/cass/cass.html>
- ✓ **HDR report** - [http://watereuse.org/files/s/docs/Peter\\_Newell.pdf](http://watereuse.org/files/s/docs/Peter_Newell.pdf)
- ✓ **Battelle study** -  
[http://wqa.org/Portals/0/WQRF/ResearchStudy\\_WaterSoftenersEnvironmentalImpact-ExecSummary.pdf](http://wqa.org/Portals/0/WQRF/ResearchStudy_WaterSoftenersEnvironmentalImpact-ExecSummary.pdf)
- ✓ **Madison study** -  
<http://www.madsewer.org/Portals/0/ProgramInitiatives/ChlorideReduction/Water%20Softener%20Study%20Final%20Report%20111615.pdf>



# Quiz

Take the quiz for Module 4...



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