

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

Module 3

Softeners, the Environment and Sales

Arizona Water Quality Association



Salinity as a Problem, Softeners part of the Solution

salinity is a genuine problem in the environment:

- ✓ **hurts** agriculture and lawns
- ✓ **deleterious effect** on recycled water

central waste water treatment does not address salinity:

- ✓ **microfiltration systems** and other approaches necessary
- ✓ Scottsdale: **Tens of millions of dollars** would be needed to build and operate new facilities

One of the solutions is a higher efficiency water softening device.



Salinity as a Problem, Softeners part of the Solution

Without a water softener, consumers would lose the many benefits including:

- ✓ better operating showerheads and faucets
- ✓ longer-lasting major appliances
- ✓ less detergent and hot water for cleaning
- ✓ personal care, skin and hair

And, consumer costs to treat the effects of hard water chemically are increased.





Benefits of Professional Credentialing and Product Certification Programs

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

- ✓ trade associations provide a critical role in keeping **professionalism and integrity** high
- ✓ **voluntary credentialing**, such as certification, has an old and very important place in the American workplace
- ✓ over **600 organizations engaged** in voluntary certification or credentialing



Benefits of Professional Credentialing and Product Certification Programs

Talking points with customers:

- ✓ professionals go through a series of classes and **specialized training** and pledge to abide by a **strict code of ethics**
- ✓ a **necessary level of knowledge** of water chemistry and treatment technologies
- ✓ a **commitment to stay on top** of industry developments through continuing education
- ✓ **certification is reviewed** by outside experts



Benefits of Professional Credentialing and Product Certification Programs

The Gold Seal product certification program operated by WQA:

- ✓ an independent **seal of approval** on a variety of drinking water treatment products
- ✓ **awarded** only after laboratory tests, literature review and materials assessment
- ✓ **guidelines** are developed by ANSI/NSF



Benefits of Professional Credentialing and Product Certification Programs

Talk to customers about the WSSP-A program:

- ✓ you **committed the time and effort** to understand the crucial issues
- ✓ **learned about solutions** that are right for every homeowner



Why Your Customers Should Care

Why is it important to encourage consumers to make decisions that will save water and reduce salinity?

- ✓ personal **cost savings**
- ✓ the “**good citizen**” aspect



Why Your Customers Should Care

Compelling facts include:

- ✓ the major reservoirs in the state have experienced less than **50 percent capacity** in recent years
- ✓ high salinity **reduces crop yields** and requires additional fertilizers and soil additives



Why Your Customers Should Care

Do our part or face:

- ✓ higher **taxes**
- ✓ higher **food costs**
- ✓ **less water**





Helping Customers Choose the Right System

- ✓ homeowners have **many options**
- ✓ try to fit their **special needs and desires**
- ✓ **major** approaches:
 - resin-based
 - distillation
 - reverse osmosis RO
 - “alternative” (*no recognized standard*)



Helping Customers Choose the Right System

Distillation

- ✓ vaporizes water and remove impurities
- ✓ pure water molecules taken away from contaminants that have higher boiling point than water
- ✓ water first heated until it reaches boiling point
- ✓ evaporation takes place



Helping Customers Choose the Right System

Distillation *continued*

- ✓ evaporated water “captured”, returned through system of tubes
- ✓ removes many:
 - minerals
 - bacteria
 - viruses
 - chemicals that have a higher boiling point than water
 - salt
 - Hardness ions (Ca^{2+} and Mg^{2+})
- ✓ possible concerns:
 - can be relatively expensive
 - may not treat every concern



Helping Customers Choose the Right System

Reverse Osmosis (RO)

- ✓ one of the most common water treatment systems
- ✓ hydrostatic pressure gradients across a special membrane that allows water molecules to pass
- ✓ hardness ions (eg. Ca^{2+} and Mg^{2+}) flushed away by excess water into a drain
- ✓ possible concerns:
 - can foul quickly in hard water
 - require frequent cleaning or replacement
 - should not be put through metal piping



Helping Customers Choose the Right System

Portable Exchange (PE)

- ✓ resin-based softening technology
- ✓ provide newly regenerated resin on a regular, as needed, basis
- ✓ spent resin is regenerated at centralized treatment facility
- ✓ possible concerns:
 - not available in every community
 - cost considerations



Helping Customers Choose the Right System

“Alternative” salt-free softening devices

- ✓ “salt-free” softening systems claims can potentially cause confusion
- ✓ remember: water softening is reduction of minerals that can damage pipes, appliances and clothing
- ✓ some alternatives do not remove the hardness minerals
- ✓ possible concerns:
 - no national third party testing and certification
 - difficult to verify/compare claims
 - only softeners are demonstrated to extend life of appliances and plumbing and even your clothes



Rebate Programs



Explore whether rebate programs might be available in your community

Example: Scottsdale announced a pilot program.



Review

- ✓ customers should understand that as a credentialed professional, you have received the training to help them. They can also feel confident that systems and devices that have been independently tested.
- ✓ once they understand the importance of finding products that are sensitive to the environment, they can choose from a number of options:
 - traditional ion-exchange softeners
 - distillation and RO
 - Portable exchange (PE) where available, is effective at preventing salinity from entering water sources.
 - “salt-free” devices may not remove hardness



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
- ✓ **Battelle study** -
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 3...



Credits

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