

Joseph Harrison, P.E.



Softening Update

During the recent WQA Aquatech USA 2009 conference, various association task force groups held semiannual meetings to discuss current trends and regulatory issues.

Joseph Harrison, technical director of the Water Quality Association (WQA) recently spoke with Stephanie Harris, managing editor of Water Quality Products, to provide an update on water-softener issues discussed at the WQA Aquatech USA meetings.

Stephanie Harris: What updates can you provide on the WQA/NOWRA "Guidelines for the Use of Water Softening and Onsite Wastewater Treatment Equipment at the Same Site?"

Joseph Harrison: The WQA and the National Onsite Wastewater and Recycling Association (NOWRA) maintain a joint task force on the issue of discharges from household water supply treatment systems to onsite wastewater systems.

When we realized the time that is required to identify the specific questions to be answered regarding alleged effects of water softeners on wastewater systems, to reach consensus agreement on appropriate research and to obtain funding for research, the group decided to develop an "in-the-meantime" guidance document for those who may have concerns about the compatibility of water softeners and wastewater treatment on the same site.

The guidance says both are necessary and are commonly used together, and in the majority of cases no problems are indicated. Reports of issues have been sporadic and mostly anecdotal. The guidance goes on to list seven points of advice around proper sizing, to consider DIR and salt-efficient water softener choices, how to maintain and not abuse the water and wastewater treatment systems, and to consult both of the separate experts in wastewater systems and water softening systems if any problem arises.

The NOWRA board of directors approved the document in February and the WQA board of directors approved it on March 20.

Harris: What progress is being made on the WERF workshop on the subject of water treatment discharges to onsite wastewater treatment systems?

Harrison: The Water Environment Research Foundation (WERF) is organizing this national workshop to be held in 2009. Participation will be limited to about 30 selected WERF invitees. We want to include representation of all views from representative states, counties, U.S. EPA, WQA and NOWRA. It will be a working

workshop with the purpose to identify (with consensus agreement) three to six discrete and priority issues that need to be answered in this contentious arena and that should perhaps be the focus for funding and research.

Harris: What insight can you provide on the comprehensive softener proposal that the WQA submitted to California last year?

Harrison: History in California has shown that the banning of water softeners does not work. Hard water is a bona fide quality-of-life deterrent and it causes expenses in cleaning, replacements of appliances and fixtures and heating of water.

The industry's comprehensive softener proposal takes advantage of the considerable room that exists to reduce salt discharges by looking at commercial, industrial and institutional salt usages and by amenable programs for upgrading residential water softeners to modernized and more salt-efficient units without removing the benefits of softened water from anyone.

California institutions, such as state prisons for example, receive enormous shipments of salt each year. WQA members are showing upgrades to state-of-the art water softening systems utilizing countercurrent regeneration with soft water to reduce salt usage by 40% to 80% and regeneration water usage by up to 35%.

Harris: Have there been any developments with the Phoenix Challenge?

Harrison: The Phoenix Challenge is a successful example of our industry members working with area leaders in Phoenix to develop solutions. In cooperation with WQA and the Arizona WQA, many local companies are demonstrating the lead to upgrade to better equipment, promoting high-efficiency water softeners and coordinating with regulatory initiatives.

The result as stated in the recent HDR Engineering report on the city of Phoenix "Water Softener and Treatment Study" is to view any ban of water softeners as a "last resort." Even TDS treatment of reclaimed

water is now being recommended as more appropriate.

Harris: What new softener research will be conducted in the coming year?

Harrison: The Water Quality Research Foundation has three new research studies in the works for 2009:

1. Water Heater Efficiency Improvements on Softened Water by Battelle Memorial Institute will be a landmark study to demonstrate water softeners as one of the best energy savers in residences.
2. The Soap and Detergent Study is designed to update earlier reports. This research will substantiate savings and cleaning effects that can be claimed for using softened water with varying detergent amounts and on hot and cold laundry applications.
3. Energy Benefits of Upgrading to High Efficiency Water Softeners is a study that will attempt to show utilities and municipalities what savings water softeners can bring in energy use, water and wastewater treatment, pumping and acquisition costs for water rights.

Harris: What softening issues should the industry be on look out for this year?

Harrison: The Water Reuse Foundation recently solicited a request for proposals to evaluate alternatives to domestic ion exchange water softeners. Many highly respected entities have responded to this request, and it will be interesting to see what findings come from this.

Ion exchange water softening is one of the most robust and effective treatment technologies we have. It always works completely and reliably wherever it is used in most any application and location. It would be difficult to replace the ion exchange water softener with something that works as well. I believe water softening improvements will be moving ever closer toward the stoichiometric perfection number of 6,000 grains of hardness removed per pound of salt used. *wqp*

CALENDAR

June

3 – 5 **Aquatech China**
Shanghai, China
tel: 630.505.0160
www.china.aquatechtrade.com

4 – 6 **Florida WQA Tradeshow & Conference**
Orlando, FL
tel: 863.644.6622
www.fwqa.com

14 – 18 **ACE.09: AWWA Annual Conference & Exposition**
San Diego, CA
tel: 800.926.7337
www.awwa.org

July

8 – 12 **Texas WQA Tradeshow & Conference**
League City, TX
tel: 361.573.6707
www.twqa.org

For a complete list of industry events, go to www.wqpmag.com.

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