

The Florida Flow

NEWS TO USE

APRIL 2023

UPCOMING EVENTS

WQA Convention April 18-20 Caesars Forum Las Vegas, NV

FWQA Board Meeting Wednesday June 7, 2023 Caribe Royale Resort Orlando, FL

FWQA Golf Tournament June 7, 2023

FWQA Convention Education June 8 and 9, 2023 Caribe Royale Resort Orlando, FL

FWQA Convention Trade Show June 8, 2023 Caribe Royale Resort Orlando, FL

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PRESIDENT'S MESSAGE



FWQA President John Ladue We had an awesome turnout in January, for our FWQA Rescheduled Fall Education Seminar. Considering all the modifications that were necessary to make that event happen we had a full house for the hands-on seminars. It was especially nice to see so many new young faces that are supporting our growing industry. Special thanks go out to our presenters: Cindy from Stenner Pumps, Don from Safeway, Dennis from MD Pumps/Gould's and Larry from Aqua Wholesale. Without all of you, we would not have had such a successful event. Check our website for pictures. www.fwqa.com

I am looking forward to the Water Quality Association Convention and Exposition on April 18-20th in Las Ve-

gas. I have never been and am really looking forward to the event. There will be manufacturers and OEMs from around the nation who we will be able to spend time with and learn about new products and concerns in our industry. My goal is to bring back some new information and projects to share and talk about at the FWQA Convention in June 2023 in Orlando.

Be sure to look inside for convention information—Golf Tournament, Great Speakers on current Topics, a Trade Show full of exhibitors waiting to help you succeed. Don't miss out on our Thursday evening fun hospitality event it's fun for the whole family and this year we will have a live auctioneer to add to the excitement of our auction—the fundraiser for our scholarship fund.

With all the craziness that has happened over the last few years, it is hard to believe that our industry has not slowed down but has actually picked up in the last quarter even with constantly increasing interest rates. So It's Full Speed Ahead for FWQA this Year!



A new norm for disinfection?

Jeffrey Sadonis, VP of FWQA, All American Purification

When a consumer opens their tap in their home on municipal water they are expecting the very best water delivered to them. All of us in our industry know that isn't necessarily the case. Sure, the water has been deemed safe by the municipality and regulations put in place by the EPA, but in many areas in our state, the water is still very hard and is full of chemical disinfection of that sources choice. Right now, there are municipalities across the country that are switching from more traditional methods of sanitization from chlorine to peracetic acid as they look for more efficient and cost effective ways to deliver sanitized water to consumers. What does that mean for our industry? Let's take a look.

Peracetic acid, known as PAA, is essentially a pairing of acetic acid with hydrogen peroxide in the presence of an acid catalyst. This acid concentration can be adjusted during manufacturing to deliver the proper strength that end user is asking for. With all disinfectants, the effectiveness of this method depends on contact time, dose, and the level of organics in the water supply. PAA decomposes quickly in the water within the first few minutes of contact time depending on the dose and strength. Right now this method isn't being used widespread but is gaining traction from year to year. PAA does not possess any by products that disinfection by chlorination has attached such as THM's to it and may soon be the new norm in disinfection. PAA is currently used in the food industry as a cleanser and has shown great ability to prevent bio film formation and bacteria. It has a longer shelf life than chlorine and is environmentally friendly. Currently, it does cost more than traditional chlorination methods, but it's also far my efficient needing smaller doses. As more municipalities adopt this method, costs are expected to decline and expand its use. It's benefits are being used by both water and wastewater treatment worldwide.

What does that mean for our industry as far as removing it at point of use? Carbon is used to remove it if it were present in the water. PAA treatment studies say that there will be no harmful byproducts like what chlorine carries and it doesn't have the lifespan that chlorine has. Best practice is to continue to offer home-owners and businesses on municipal water proper carbon filtration to remove any chemicals or contaminants from the water supply. It is important that the municipalities use chemical disinfection as a treatment process to provide safe water to the home, and it's equally important for our industry to provide filtration to offer the healthiest option for the end user.



Advanced electrode to help remediation of stubborn new 'forever chemicals' by Lois Yoksoulian, University of Illinois at Urbana-Champaign

As new environmental regulations are rolling out to mitigate the industry-retired long-chain chemicals known as PFAS in drinking water, there are concerns regarding a new breed of "forever chemicals" called short-chain PFAS. Research from the University of Illinois Urbana-Champaign is helping shift the focus to include mitigation of the chemicals—which researchers say are just as persistent as, more mobile and harder to remove from the environment than their long-chain counterparts.

A study directed by chemical and biomolecular engineering professor Xiao Su uses electrosorption rather than filters and solvents and combines synthesis, separations testing and <u>computer simulations</u> to help design an electrode that can attract and capture a range of short-chain PFAS from environmental waters. The findings are published in the *Journal of the American Chemical Society*.

"One of the challenges of working with short-chain PFAS is that they are not well-studied. We know that they contain fewer carbon and <u>fluorine atoms</u>, making them shorter molecules and, therefore, more mobile—or freer to interact within the natural environment," said Su, who collaborated with chemical and biomolecular engineering professor Diwakar Shukla. "Their electrostatic properties differ and they are more hydrophilic, meaning they are more apt to bond with <u>water molecules</u>. These properties combined make them more difficult to separate from water than their long-chained counterparts."

The differences among short- and long-chain PFAS—and between long-chain PFAS in general—are significant enough for Su's team to rethink its previously-developed electrode designed to attract, capture and destroy long-chain PFAS from the environment and drinking water sources. PFAS is an abbreviation for perfluoroalkyl and polyfluoroalkyl substances.

"One way to think of the behavior of short-chain PFAS is that they don't like to be around anything except their own kind," Su said. "So, to attract them, we need to sort of bait them with grafted fluorine groups—the "F' in PFAS—on the surface of an electrode."

Kinship is not the only challenge, though, Su said.

"The lengths of short-chain PFAS molecules vary, giving them different physical properties," Su said. "This means we need to be able to tune the electrode just right to attract and eventually release the short-chain PFAS, with molecular-level understanding of the interactions being key to success."

The study details the careful selection, matching and triangulating of different copolymer materials to develop an <u>electrode</u> that can attract a range of short-chain PFAS and induce an <u>electric field</u> to help release the molecules when needed.

Su said this work is a critical early step in removing short-chain PFAS from the environment, which have replaced long-chain PFAS in many industries.

"We still have much work to do," Su said. "Future studies will focus on coupling the electrodes developed in this study with electrochemical degradation methods to ensure removal of these persistent contaminants from the environment."

Illinois researchers Anaira Román Santiago, Jiho Lee and Johannes Elbert led the experimental investigations within the work, with graduate student Song Yin and Shukla leading the computational simulations.

Convention Exhibitors (as of 3/30/2023)

check our website for updates www.fwqa.com

Action Manufacturing A. O. Smith Water Treatment North America Aqua Wholesale **Aqueous Solutions Global** Cargill Enpress FloTrol Foundation Finance Franklin Water Treatment LLC G A Murdock Good Marketing Group John Guest USA, Inc. Liquid Soap Products Morton Salt Nelsen Corporation Pentair **Pro Products** Pure and Gentle Soap ResinTech, Inc. Safeway Water Scotwood Industries, LLC Stenner Pump Company WATTS Water Treatment Warehouse WCP WQA

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Florida Water Quality Association Annual Convention June 7, 8, and 9, 2023 **Full Speed Ahead!**



8:00 am

8:15-9:15 am

Wednesday June 7, 2023 FWQA Annual Golf Tournament -**Celebration Golf Club**

Thursday June 8, 2023

- 7:30 am Registration
- **Time Management** 8:15-9:15 am **The Homeowner Experience**
- (Session 1) (Session1)

These sessions will be repeated so you can attend both.

- Servicing Clack Control Valves 9:25-10:25 am (Session 1) 9:25-10:25 am The Homeowner Experience (Session 2 -repeat)
- 10:45-11:45am **Time Management** (Session 2- repeat) 10:45-11:45 am Servicing Clack Control Valves (Session 2—repeat)
- FWQA Business Meeting, Election of Officers 11:45– 12:30 am WQA and Industry Update
- FWQA 2023 TRADE SHOW OPEN 12:30 pm-4:45 pm (Lunch served in Show 4:30 pm Live Auction You can Bid and help make it A Winner for the FWQA Scholarship!
- 6:00 to 8:30 pm Hospitality Reception– a Pool Side Delight!

Friday June 9, 2023

- 8:15–9:00 am Florida– Full Speed Ahead are you with it?
- Job Costing a Powerful Tool 9:00-10:00 am
- 10:10-11:10 am Water Demo Sales Meeting! Learn to Raise your Closing Average!
- 11:15 am-12:15 pm PFAS Removal, Sharing What We Know

Water Quality Is Not A Guarantee

by Les Merrill from www.wateronline.com

We often take our drinking water for granted. We always have access to running water, so we don't think much more about it. However, quality water is not always a guarantee. In fact, a number of cities <u>are having issues with their water</u> <u>right now</u>. The government creates laws to <u>protect drinking water</u>, and the EPA determines guidelines for how to ensure safe drinking water. Unfortunately, water quality issues may still arise that put you and your family at risk for disease — or worse. Let me share some of the most serious risks to your drinking water and how to solve them.

Corrosion

<u>Corrosion</u> occurs when the metal surface of the pipe breaks down. This exposure may introduce contamination into your drinking water that could cause health issues.

There are two main types of corrosion: microbial and chemical. Microbial corrosion occurs when a biological material forms a film that reacts with the piping in your home. Chemical corrosion occurs when the water chemistry becomes unbalanced. For instance, simple changes in water pH levels (or many other factors) can cause pipe deterioration. In addition to harmful chemical and microbial exposure (which we discuss in the next section), contaminations can lead to a number of waterborne illnesses including:

- **Legionnaire's Disease.** Legionnaire's is usually spread from airborne droplets of bacteria-contaminated water from pools, fountains, or home tap water. While it is rarely spread to other people, and can be treated with antibiotics, Legionnaire's is a serious illness that impacts your lungs and can cause headaches, shortness of breath, fever, and muscle aches.
- **E. coli.** Exposure to the bacteria E. coli (coliform) can lead to serious side effects including diarrhea, vomiting and stomach cramps. Young children and the elderly often experience more extreme effects and can be at risk of kidney failure. While rare, E. coli can get in your plumbing system if the water source gets contaminated. When this happens, your city will put out a boil order to purify the water.
- **Typhoid fever and cholera.** Among other waterborne diseases, typhoid and cholera are serious bacterial infections that can be fatal.

Lead

While we now know that <u>no amount of lead in water is safe</u>, that was not always common knowledge. Up until the 1980s, lead was used in pipes, paint, and a number of items around the house. Once the risks of lead were discovered, most cities and homeowners did what they could to replace any lead pipes as quickly as possible. However, what many people do not realize is copper plumbing pipes were connected using lead-based solder. Lead can also creep in from brass fittings and galvanized pipe. The source of lead is not always easy to trace, but certain water tests can help you determine if there are traces of lead in your drinking water.

A handful of high-profile stories are in the news about <u>lead contamination</u> in cities across the country, with Flint, Michigan being the most notorious case. The <u>dangers from lead</u> poisoning are substantial- violence, cognitive delays, headaches, stomach issues, and joint issues are the most common symptoms. A <u>recently released study</u> shows there can be irreversible damage done when infants and children are exposed to lead, so vigilance about monitoring lead levels from any source is crucial. Certain water tests can help you determine if there are traces of lead in your drinking water to help you avoid <u>lead contamination</u>.

Copper

One source of <u>copper poisoning</u> is the corrosion of copper pipes. Symptoms of copper poisoning can include headaches, fevers, throwing up, and jaundice.

Copper poisoning may happen when an unsuspecting homeowner installs a "treatment option" purchased at a big box store or online that promises it is the BEST filtration system. Depending on the chemistry of the water and the chemistry/ operation of the new filter, a reaction can take place that leads to high levels of copper being introduced into the drinking water.

The nice thing about copper is that it can be visible to the eye, if you know what to look for. In high doses, copper turns the water a blue or greenish tint.

Plastic-Related Chemicals

Recently, the amount of <u>plastics in our bodies</u> and drinking water has been in the news. Per- and polyfluoroalkyl substances (PFAS) from plastic containers, non-stick pans, etc. all put you at increased risk. These harmful chemicals can lead to cancer, issues with oxygen absorption, infertility, and more.

Microplastics are such a major part of our lives it is hard to cut them out completely. Because they are so prevalent in our environment, they can get into our drinking water from water runoff, or <u>even from the air</u>. However, you can decrease your exposure and find ways to get it out of your drinking water.

How To Address These Problems

Risks to your drinking water are everywhere, but it is possible to detect issues before it is too late. You can start by checking your contamination levels through testing and treatment to remove the bad stuff and add the good. In some cases, like the risks that come from corrosion, you may choose to replace all the pipes in your home. In other cases, you may opt for a water filtration and conditioning system to ensure correct water pH and to take out any elements or chemicals that could have seeped into your water.

In the United States, we take quality drinking water for granted, but it is important to do our part to ensure the water we are drinking is safe.

Les Merrill currently serves as President for <u>RETEGO Labs, LLC</u>, where he leads all efforts for product and business development, manufacturing, and strategic relationships.

Welcome to Our NEW Members!		
AGUA GURU. LLC	LEAF HOME WATER SOLUTIONS	
Mr. Jose Arroliga	Mr. Cheyne Padelford	
4933 SW 74th Ct.	317 Northlake Blvd #1008	
Miami, FL 33155	Altamonte Springs, FL 32701	
AQUEOUS SOLUTIONS GLOBAL	NUCO PUMP & WELL SERVICES, LLC	
Mr. Bruce Kitchen	Mr. Jason Weicht/ Wayne D. Smith, President	
2828-A Cofer Rd.	100 Kid Ellis Road	
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<i>HEALTHY WATER SYSTEMS, LLC</i>	PLATINUM INDUSTRIES LLC	
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Palmetto, FL 34221	Port St. Lucie, FL 34953	
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	VERY WELL WATER LLC Mr. Andriy Shevchenko 7761 SW Fox Run Trail Arcadia, FL 34266	

The Board of Directors represents you, but you, the Florida Dealers and OEMs are our reason to have an association. We need not only your financial support through your dues but also value your input and participation. Consider attending a board meeting, volunteering for a committee or becoming a board member. Ask any board member or call the FWOA office to inquire. FWQA P.O. Box 2531 Lakeland, FL 33806

www.fwqa.com flwqa@aol.com 863-644-6622 863-698-0611 mobile 866-845-4988 Fax



We continue to update and correct our mailing list. If you have an error in the address of this mailing, please fax or email us the correction.*

Our Mission

To promote increased use of industry products and services, to foster and maintain the professional competency of water treatment professionals, and work with governments, other organizations and the public on issues affecting water quality. Serving the water industry since 1975

FWQA Board of Directors 2022-2023

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