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Despite the economy's hard times, the water treatment industry continues to advance. With the government taking a closer look at the capabilities of its products and the media keeping water quality in the public eye, it is no wonder this industry can continue to prosper even in hard times. This year the industry saw municipalities and the government looking at POU/POE for the first time to aid in compliance with maximum contaminant levels (MCLs). The arsenic ruling that lowered the MCL to 10 parts per billion was an enormous step in focusing municipalities' attention in the industry's direction. Perhaps it is not all good news. The economy has impacted many companies within the market, and some government bodies have hastily passed regulations without having all of the facts. For the most part, the industry continues to succeed in these "battles," and it will flourish. WQP *asked industry professionals nationwide to comment on what the water industry might see in the upcoming year. Although these professionals share their outlooks for 2003, the water treatment industry's future is uknown, but it should continue to shoot for the stars.*

Bright Future for Home Water Treatment Industry

**By Robert Ruhstorfer,
Aquion Partners LP
and the Water Quality Association**

Only a few years ago, most people didn't worry about their tap water. But recently, media coverage, high-profile lawsuits and research on the health risks of water pollutants have heightened consumers' water quality concerns. In addition, aging water systems will be difficult for cash-strapped municipalities to repair and replace.

At the same time, bottled water has surged in popularity as an adult beverage. Today, most people know how high-quality water tastes. For many Americans, it doesn't taste like their tap water. This presents a huge opportunity for the residential water-treatment industry.

Winning on Economy and Quality

Most consumers want a healthier lifestyle. Often, this means better nutrition, exercise and improving their home environment. As part of this trend, homeowners are moving away from using tap water for drinking and cooking. They demand better quality.

Point-of-use (POU) drinking-water technology is a basic home-improvement investment that pays tremendous dividends. Many POU units provide the same technology bottlers use for pennies on the gallon. Often, the units quickly pay for themselves in both savings and convenience.

Water quality is about more than just cleaner drinking water. POU systems naturally open the door for whole-house water quality. Point-of-entry (POE) systems offer many benefits. By combining POU and POE technologies, we can provide effective systems that address a variety of needs.

Increasingly, homeowners will use multiple grades of water.

- Utility-grade water for watering lawns and washing cars.
- Conditioned working-grade water for laundry and bathing.
- High-quality "ingredient" water for drinking and cooking.

Once people experience the benefits of a whole-house system, there is no going back. People love them after they are installed.

Facing the Challenges

Our biggest challenge simply is getting in the door. High-quality water is a sensory sell. It has to be tasted and felt. In-home sales calls probably will continue to be the best way to sell water systems. How we get invited into homes, however, will have to evolve.

With many states instituting "no call" lists, dealers will be challenged to shift from cold calling to more creative marketing approaches. Home show registrations, 800 numbers and other tactics will increasingly replace cold calls. While it will take time to sort out, in the end we will develop better prospect lists and market more effectively.

Changing regulations pose another opportunity wrapped in a challenge. We are in a period of active regulation and probably will be for several years. The Water Quality Association and other organizations are working tirelessly with regulators nationwide to ensure that standards are based on sound science. Eventually, these models will be adopted by other states and become national standards that raise our industry's reputation and credibility.

The future is bright. Our products are more reliable and effective than ever. Our industry has a higher level of acceptance by consumers and government regulators. We offer consumers tremendous value that fundamentally improve families' quality of life. It is a great time to be in the water treatment industry. WQP

About the Author
Robert Ruhstorfer is president of the Water Quality Association and Aquion Partners LP. Aquion's divisions include RainSoft, Erie Water Treatment Controls and ClearWater Tech.

For more information on this subject, write in 1020 on the reader service card.

Keeping Up With Business Changes

By Mike Gottlieb, ResinTech

Generally speaking, most of the traditional water treatment business areas are likely to remain relatively stagnant. Point-of-use (POU) and point-of-entry (POE) systems will be sold increasingly by large outlet distributors such as Home Depot, and opportunities for small dealers to provide these devices and services probably will remain stagnant or even shrink.

At the same time, opportunities in the high-end part of the residential market and for emerging technologies are likely to increase dramatically as the affluent in our country are increasingly

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Images courtesy of NASA and the Hubble Heritage Team (STScI/AURA).

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attracted to palatial sized homes. The market for commercial-sized residential treatment systems is growing.

As we become more aware of the pollutants in our drinking water, there are significant opportunities for emerging technologies even at the residential level. However, the best opportunities with respect to drinking water purification for small equipment manufacturers are in the small- to medium-size municipal water systems. It seems likely that the targeting of specific contaminants will be more readily accomplished in small- to medium-sized systems that are attractively priced and quickly installed. For larger industrial customers, the market is likely to continue growing.

The reliance on portable exchange by industrial manufacturing is likely to increase due to concerns about wastewater discharge and difficulty of operation. Other observations include the following.

- **Consolidation** in the industry has weeded out some of the larger players and made room for some of the smaller players. The smaller regional-serving portable exchange deionization dealers can be more efficient in local markets. Those that focus on specific niches will prosper.

- **Tightening environmental constrictions** have required that the people playing in this market pay more attention to wastewater treatment and safety concerns in the production facility.

  These changes will affect how they decide which markets to go after. For example, they have to be careful when accepting resins from metal finishing shops and EDM shops because wastewater discharge regulations have been tightened; they can no longer discharge heavy metals. This practice has been illegal but not well-enforced in the past. Enforcement has become more of a factor since the change "in administrations from Clinton to Bush.

- **Outsourcing.** The market also has changed as more end users elect to outsource.

- **Market selection.** The PEDI dealers will in the future need to be selective of the non-domestic water softening markets they go after.

  - High purity
  - Medical
  - Basic deionization market for small manufacturing processes and laboratories
  - Waste

The good news is that most of these markets are growing. Once the obstacles of regulation are overcome the profit potential also is greater. *WQP*

About the Author
Michael C. Gottlieb is the founder and president of ResinTech, Inc., an ion exchange resin supplier. Its ion exchange resin products are marketed under the ResinTech brand name.

Gottlieb has served in a variety of positions in the development and marketing of ion exchange resins over the last 30 years. Prior to founding ResinTech, Inc., in 1986, he was vice president of marketing and development of ion exchange resins for Sybron Chemicals, Inc.

Gottlieb is a member of several organizations and is chairman emeritus of the ASTM Committee on Bead Ion Exchange Resin as well as the Ion Exchange Committee of the American Water Quality Association. He has been the author of numerous technical papers relating to ion exchange resins and is coauthor of the ion exchange chapter in the third edition of AWWA's *Water Treatment Plant Design Manual*.

For more information on this subject, write in 1021 on the reader service card.

WQA Looking Ahead

By Peter Censky,
Water Quality Association

I am going to devote my space here to a concise report on the regulatory issues we are dealing with here at the Water Quality Association (WQA). Before you read on, you might want to take some Tums and aspirin. As the doctor says, "this might hurt a little."

- **California softener issues.** The moratorium on softener bans comes off in January 2003. We are working on numerous fronts as this issue becomes white hot for the forseeable future.
- **Discharge bans to septic fields.** This issue heated up quite a bit this past year in Texas, Kentucky, New Hampshire, West Virginia and a few other areas. We have been successful so far in defeating or reversing these ban attempts.
- **Quebec mandatory product testing.** The new rules require all water treatment devices sold in Quebec be certified to ANSI/NSF standards. The code presently requires that any labs certifying to those standards be accredited certifying organizations similar to those certified by ANSI in the United States. The industry protests the rules concerned that they are anticompetitive and that many small manufacturers would find them too costly and restrictive. We are working closely with the Canadian WQA on this sudden issue and expect favorable results in 2003.
- **European softener standards development.** Imagine a European football (soccer) riot and you have some idea of how much progress is being made. The regulatory process is arcane enough, but add to it attempts to gain market advantage through slanted standards and you have a picture of the process. We are doing all we can to represent our members in this process, but don't look for a good solution to emerge for a number of months at best.
- **Aqua Europa.** WQA is working diligently to help Aqua Europa deal with its internal problems and reconstitute itself in a manner that will strengthen its abiltiy to represent the industry to CEN and Brussels. Stay tuned.
- **Heterotropes.** NSF International sponsored a WHO conference at the request of Aqua Europa and WQA to nail down once and for all whether Heterotopic bacteria are a danger. The scientists met, did their work and came to the conclusion that HPC bacteria are not a threat. (The industry knew that but needed the scientists to bless it.)
- **Standards development issues.** We are seeking changes to NSF/ANSI 61 (materials safety) to accommodate POU/POE. We also are seeking a data transfer protocol for NSF/ANSI 58 (reverse osmosis drinking water treatment systems).
- **WQA's lab is seeking ANSI accrediation** for the Gold Seal Certification program.
- **New standards development.** We are developing a new distillation standard to submit to NSF. Also, a new ozone generator standard and further development of a protocol for supplemental microbiological reduction are all being worked on for submission to NSF International.
- **Small systems projects.** WQA is active with projects across the country to develop our industry's technologies as the best available technologies for small community water treatment.

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Editor's Emphasis

- **Plumbing code issues.** We are near completion of an education module aimed at plumbing code inspectors to increase their knowledge and acceptance of our products.
- **Fixture flow rates.** Developing a strategy to capitalize on our favorable study and insert changes into the national plumbing codes.

Well, that's not everything but it gives you an idea of the issues that we are contending with next year. Of course, WQA also enhances your business success in other ways as well. Here are just a few.

- Next year's convention in Las Vegas will be the best ever.
- Three new pavilions in the Ground Water show, Kitchen and Bath show and the Home Builders show will boost sales.
- The website continues to expose member companies to thousands of consumers.
- Media stories featuring WQA help educate the public.

The coming year will be an eventful one. Membership in WQA is the only way to stay on top of this sea of change. WQP

About the Author
Peter J. Censky was appointed executive director of the Water Quality Association (WQA) in 1987. Censky brought to his new position an extensive background in coordinating policy and legal strategies. Censky is a member of the Board of Directors of Aqua Europa, a European Trade Association headquartered in Brussels, Belgium. WQA (www.wqa.org) is an international trade association of 2,300 member companies worldwide who manufacture and sell point-of-use (POU) and point-of-entry (POE) water treatment equipment.

For more information on this subject, write in 1022 on the reader service card.

Bottled Water Continues Growth

By Dr. Alan Leff, QUASI LLC

As I peer into my crystal ball, this is what I see….

The U.S. domestic bottled water industry will continue to consolidate in its small pack business (less than 2.5 gallon/9 liters). Small pack bottled water will be accepted as a commodity. However, there will be extensive competition in the 5 gallon/18 liter business. The competition will drive the price much lower and only the low cost producers and distributors will survive. The results will be fewer local companies in the large pack business. Nonetheless, this is a service business and good local service will allow the better service companies to survive long-term.

The global bottled water industry faces a similar future. The fastest growing markets are in India, China and Indonesia. The major players will continue to enjoy the disproportionate growth of their shares of the small pack market. They also will reap their brand recognition benefits in the large pack business. The support industries will realize the extent of the China market when they attend the Asia Bottled Water Association Convention in Shanghai. A similar impact on the support industries will occur from the result of the International Bottled Water Association Convention in joint forces with the Worldwide Food Expo in Chicago.

The nature of the industry and the trade associations that represent the industry begin to change shape and form this year. Bottled water, beverage and soft drink associations blend and merge to meet the needs of small pack bottlers, large pack bottlers and mineral water producers, globally.

Putting my money where my mouth (or crystal ball) is, I am directing my business to be consistent with this picture. WQP

About the Author
Dr. Alan A. Leff is the managing director of QUASI LLC, which provides training, consultative inspections and third-party audits to the food and beverage industries. Leff is a current member of the Water Quality Products editorial board. He previously served as vice president of operations for National Testing Laboratories Network. Leff is a member of several associations and serves as cochairperson on the ICBWA Technical Committee and chairperson on the Asia Bottled Water Association Technical Committee.

For more information on this subject, write in 1023 on the reader service card.

Bottled Water: Beyond Trend to Necessity

By Joseph K. Doss, International Bottled Water Association

The beverage industry, led by the bottled water segment, continues to grow at an astounding pace. In 2001, bottled water posted a solid 10.6 percent volume growth and saw a healthy 9.4 percent increase in per capita consumption to 19.5 gallons. This continued growth means increased production at bottled water plants and a greater need for those products and services that help bottlers produce the safe, high-quality products for a thirsty public.

Beverages have become increasingly popular for at-home and on-the-go consumption. In the water category, "enhanced" or "functional" products have captured the public's fancy by using ingredients that purport to deliver certain wellness or performance benefits. As a result, virtually every month, new product introductions vie for retailer and consumer attention. However, not all of these products meet the U.S. Food

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Images courtesy of NASA and the Hubble Heritage Team (STScI/AURA).

and Drug Administration's (FDA) Standard of Identity (i.e., definition) of "bottled water."

Determining whether a particular beverage really is a "bottled water" is a brand-by-brand proposition. One must consider the additives that are used, how the product is labeled and if/how claims are stated in labeling. By law, ingredients added to conventional foods such as bottled water must be an FDA-approved food additive or generally recognized as safe. From there, distinctions as to the product's labeling and usage must be considered, as the product could be classified as a soft drink, dietary supplement, vitamin or even a drug. Of course, some of these products do meet standards that place them squarely in the bottled water realm.

However, some things about bottled water (e.g., product safety, quality and security) will never go out of style. As this article goes to press, federal and state lawmakers and regulators are looking even more closely at food safety and security. Moreover, emergency and safety advocates such as the American Red Cross and the Federal Emergency Management Agency continue to issue water storage guidelines for emergency preparedness. It is bottled water that continues as a leader in developing and implementing processes that help ensure safety and security, from the water source to finished product.

Starting with approved groundwater or public water sources, as required by FDA's bottled water Good Manufacturing Practices (GMPs), bottlers look to equipment manufacturers and consulting services for continued product quality enhancement. Whether tried and true or newly innovative, the water quality products industry must be an integral partner in developing real-world solutions to help ensure ever-improved bottled water safety and quality.

The International Bottled Water Association (IBWA) and the bottled water industry are tuned into the latest safety and security measures to help protect production, packaging, transport and distribution systems. Through the IBWA Model Code, member bottlers are required to implement a Hazard Analysis and Critical Control Point (HACCP) program, which was voluntarily adapted by IBWA from FDA and the U.S. Department of Agriculture, for a science-based approach to bottled water safety from water origin to finished product. FDA recognizes HACCP-type programs as a key component of plant and product safety and security.

The IBWA Model Code also requires IBWA member bottlers to have in place written security procedures that make clear bottling facility's plan source, transport and production measure to help further ensure the safety of the plant and products. All IBWA Model Code requirements are verified by an annual, unannounced third-party plant inspection program and records audit.

The IBWA Model Code, in concert with stringent federal and state regulations and standards, help secure an important, viable bottled water industry now and in the future. WQP

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Editor's Emphasis

About the Author
Joseph K. Doss has served as president and CEO of the International Bottled Water Association (IBWA) in Alexandria, Va., since 1999. Doss has extensive experience in food and drug, government affairs, public relations, legal and association management issues.

Founded in 1958, IBWA's membership includes U.S. and international bottlers, distributors and suppliers. IBWA works with the U.S. Food and Drug Administration (FDA), which regulates bottled water as a packaged food product, and state governments in concert with the IBWA Model Code to set stringent bottled water standards for safe, high quality products. Contact IBWA at 800-WATER-11; www.bottledwater.org.

For more information on this subject, write in 1024 on the reader service card.

EPA and Municipalities Provide New Opportunities

By Shannon Murphy, NSF International

Consumer concerns over water quality and the general public's awareness, whether through the water treatment industry, the local retail outlet, mass media or their own research, serve as drivers for the water industry. This heightened awareness in water quality and the need for clean potable water will continue to promote what appears to be the next market for many POU/POE water treatment devices. Whether this increased consumer awareness and concern is through continued research and reduction of existing allowable levels for contaminants or through the potential contamination of water supplies, consumers are looking for assurance that they have a proactive means to ensure acceptable drinking water.

In the past year, we witnessed a greater focus on the use and implementation of POU and POE devices for water treatment municipalities as a part of their systems for ensuring compliance with federal water quality requirements. As we know, the maximum contaminant level (MCL) for arsenic was reduced from 50 parts per billion (ppb) to 10 ppb, effectively lowering the previous arsenic MCL by 80 percent and affecting some 4,000 public water systems, the majority of which serves fewer than 10,000 customers. NSF International, in conjunction with the U.S. Environmental Protection Agency (EPA) and the National Water Research Institute, currently are involved in assessing the feasibility of using POE devices to meet the drinking water standard in these small communities. This study, expected to be completed in late 2003, will establish the cost, maintenance requirements, water quality compliance issues and public acceptability of this centrally managed POU treatment. The use of POU devices, through the municipality, may have long-lasting positive effects on the POU/POE market. With this added support from the municipalities, this working relationship will add value to the water treatment industry in the eyes of the consumer.

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Images courtesy of NASA and the Hubble Heritage Team (STScI/AURA).

Homeland security will begin to play a larger role in the market focus of the water treatment industry. NSF International's ETV group currently is involved with the Department of Homeland Security in developing validation protocols for water treatment devices. Initially focusing on mechanical filtration, the plan is to have a number of different protocols completed by the end of 2003. The goal of the testing that will be performed according to these protocols is to establish the effectiveness of POU/POE devices as tools for consumer protection in the event of a terrorist attack on public water supplies. This year will see heightened awareness and push for the development of these protocols. Systems are designed to meet certain performance needs, and with many of these protocols in the development phase, this year could see the development of new innovative products to meet these new, more stringent exotic organism removal protocols.

This year also will see the completion of a long-standing industry concern regarding purification. Standards 55 for supplemental treatment and Standard 221 for treatment of unknown water sources are planned to be completed this year. These standards will address the removal of waterborne microorganisms such as bacteria, viruses and protozoa. The microbial task group diligently worked through several hurdles in the past year including test methods and surrogate organisms for predominant treatment technologies such as mechanical, halogen, ultraviolet, distillation and ozone. Completion of this standard, initially intended to be completed in 2002, will allow the industry to validate the performance of microbiological purifiers according to an accepted national standard.

Some may say that we began down this path years ago, and some may say only in the most recent past. However, the merging of the water treatment industry with the water municipalities will see continued developmental efforts that will only strengthen the growing relationship. Centrally managed POU treatment, whether driven by the lower arsenic MCL or through the Department of Homeland Security, will become a greater reality in the coming year. Officials are concerned about cost, operation and maintenance of these water treatment devices. Through the NSF ETV research project, many of these operation and maintenance concerns are being addressed. Manufacturers may need to develop new innovative products to meet the tighter removal requirements of these protocols. Consumers will view this moving partnership as a proactive means to personally improve the quality of their water and thus their family's well-being. WQP

About the Author
Shannon Murphy is operations manager of the Drinking Water Treatment Unit program at NSF International, Ann Arbor, Mich. He has been with NSF for seven years, working in the areas Standard 61 and the drinking water treatment unit standards. His bachelor's degree in biology is from Concordia University in Montreal, Canada, and his master's degree in biology with an emphasis on limnology is from Wayne State University in Detroit. Murphy may be reached at 800-673-6275; fax 734-769-0109; murphy@nsf.org.

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