

Only Time Will Tell

2002 Industry Predictions

The unprecedented events of Sept. 11 and the recession that began hitting our nation at the beginning of 2001 created havoc in the business world. The water industry was no exception; it also saw its share of fluctuation. With such an unpredictable economy, we move into 2002. WQP asked industry professionals nationwide to comment on what the water industry may see in the upcoming year. Although these professionals share their outlooks for next year, only time will tell what lies ahead.

2002 Small System Research

By James A. Goodrich, Ph.D.,
U.S. Environmental Protection Agency



Consumers Rule! As we enter into a new year, the small system research and regulatory approach is becoming more focused on smaller applications down to the point-of-use/point-of-entry (POU/POE) scale. As research on smaller treatment devices grows, interest also is growing in terms of how POU/POE can fit into a utility's overall strategy of providing safe and affordable water to customers in community and non-community transient and non-transient systems of all sizes. Given the events of Sept. 11th and the subsequent biological attacks, using water further treated with home water treatment systems will continue to become more an

integral part of research efforts. The U.S. Environmental Protection Agency (EPA) has been considering for several months various "future scenarios" as part of the Comprehensive Drinking Water Research Strategy process scheduled for completion at the end of 2002. Prominent in these scenarios are the use of POU/POE devices, new technologies and materials and the need to treat poor quality raw water in water-short areas, all with the consumer very much involved. Bundled with this is the view that water utilities may need to provide additional services such as monitoring and testing to small systems. In conjunction with this approach, EPA will be accelerating its research into development of the "electronic circuit-rider" concept that enables both the monitoring and control of isolated or satellite small drinking water treatment systems (even POU/POE) from a central location, thus providing some of the economic and technical benefits enjoyed by larger systems while maintaining local ownership.

The EPA/NSF International Environmental Technology Verification, Drinking Water Systems Center will

continue its field verifications looking at new medium pressure UV systems, adsorptive media for arsenic removal and membranes. Upgrades to testing protocols also will be undertaken.

In regard to regulatory activity, the Contaminant Candidate List (CCL) just recently will have made its regulatory determination on about 10 compounds. The next list, CCL2, is not scheduled for release until 2003. Thus, during 2002 treatability research will continue on many of those (nearly 50) contaminants on the original CCL to determine if they will remain on the CCL2. During 2002, the Stage 2 Disinfection Byproduct Rule, Long Term 2 Enhanced Surface Water Treatment Rule, will be proposed with a final rule expected in 2003. The Ground Water Rule is scheduled to be final in the fall of 2002.

As we look into 2002 and even further out into the future, small system research will be performing cost (especially O&M) and performance evaluations on hybrid configurations of various membranes including ceramic, advanced oxidation processes, new adsorptive media/resins

and biotechnologies. There could be the application of both wastewater and drinking water technologies with an eye towards consideration of decentralized wastewater treatment technologies for wastewater reuse to provide customized water qualities for various uses ranging from the household scale up to several hundred customers.

About the Author
James Goodrich, Ph.D., has been employed by the EPA, Office of Research and Development, National Risk Management Research Laboratory, Water Supply and Water Resources Division for 25 years and currently is chief of the Water Quality Management Branch. He manages a multidisciplinary program relative to small community drinking water and wastewater needs, remote monitoring/control of treatment systems, international drinking water treatment technology demonstrations, drinking water distribution system water quality, watershed protection and restoration and utility adaptation to global change. Goodrich has authored and co-authored several peer reviewed journal articles, EPA Handbooks and book chapters as well as a book titled *Point-Of-Use/Point-Of-Entry for Drinking Water Treatment*.

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

Standards Develop from Nation's Needs

By Tom Bruursema, NSF International



The concept of water being “our most precious resource” was never more evident than with the terrorist attacks of 2001. It became readily apparent for all, and a refresher for many, that our water not only is a precious resource but also a potentially vulnerable one. Coupling this with other recent events such as the lowering of the arsenic maximum contaminant level, it is clear that water quality will affect many industries in 2002, along with the purchasing power of the informed consumer.

For NSF, this means a continued emphasis on development of new and revised standards to which products can be tested and certified. A committee, established late in 2001, will be meeting to review test methods and criteria for exotic contaminants such as anthrax. It is expected that this will result in short-term opportunities whereby surrogate challenges can be identified and correlations made between these new contaminants and existing, related claims. At the same time, the committee will work to identify long-term studies that will be necessary to address other contaminants where research data is limited.

With the recent U.S. Environmental Protection Agency announcement of the lower arsenic maximum contaminant level to 0.010 mg/L, it is expected that industry interest in validation of arsenic removal performance for point-of-entry and point-of-use devices will greatly increase. To that end, NSF has been working with its Arsenic Task Group to design and validate appropriate test methods for NSF/ANSI 53 and NSF/ANSI 58. It is expected that methods for the reduction of pentavalent arsenic will be established by early 2002, and protocols for total arsenic reduction (pentavalent and trivalent) will follow later in the year.

Another area of particular industry interest is establishing a performance standard for the reduction of common waterborne microorganisms such as bacteria, viruses and protozoa. The NSF Microbial Water Treatment Task Group has been working to develop test methods and criteria for the predominant treatment technologies such as mechanical filtration, halogen, ultraviolet light, distillation and ozone. The scope of work

is focused first on development of methods for devices providing supplemental treatment of water that already is considered potable and will later move to methods for devices to be used on water of unknown quality. It is expected that some of these standards will be finalized in 2002.

This past year has brought with it many unexpected events. It is impossible to predict what will come in 2002. What we can be sure of is that the water treatment industry will be prepared to react quickly to these rapidly changing times. NSF is committed to assisting in these transitions, continuing with our long history in consensus product standards, testing and certification.

About the Author

Tom Bruursema is the general manager of the Drinking Water Treatment Unit Program and Environmental and Research Services. Bruursema has been employed by NSF for 16 years, serving in a number of technical and administrative positions. Bruursema is a member of the National Onsite Wastewater Recycling Association (past member board of directors), National Environmental Health Association, Controlled Environment Testing Association (past member board of directors), American Biological Safety Association, National Air Filtration Association and member of the Water Quality Association World Assembly Division Standards and Regulations Committee.

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

The Future is Bright for Bottled Water

By Joseph K. Doss, International Bottled Water Association



Americans steadily have increased their bottled water consumption over the past quarter century. From 1976, when the average annual per capita consumption was 1.5 gallons, to 2000, when the average annual per capita consumption reached 18.3 gallons, bottled water consumption has risen at a steady clip each year with little prospect of a slowdown.

Bottled water is not a fashion statement; it is part of a healthy lifestyle. As people become increasingly aware of the importance of water consumption—and maintaining proper hydration—they will continue to incorporate bottled water into their daily diet and as a key element of their health and wellness regimen. Why?

Bottled water is a convenient means of enjoying a consistently safe, high quality beverage. It provides adults and kids alike an option to sugared soft drinks and juices, caffeinated coffee and tea and, for adults, an alternative to alcoholic beverages. This fact is illustrated in the nearly 28 percent growth rate of the single-serve or retail segment of the bottled water industry packaged in popular PET containers. Moreover, it is reflected in the strong, 8 percent growth in 2000 of the entire bottled water industry. Analysts predict that bottled water will be the second largest selling beverage behind carbonated soft drinks by the year 2004.

In the home and office markets, three- and five-gallon cooler jugs deliver safe, high-quality water to consumers. In addition to drinking it, many consumers choose it for making soup, coffee and tea, juice from concentrate, or the many other foods and beverages in which water is used as an ingredient. Volume in this area is up about 3.2 percent, with more and more consumers making bottled water their family's beverage of choice.

This upward momentum of bottled water consumption will continue into the future. As consumers pay increasing attention to the quality of their drinking water and continue to demand high quality foods and beverages, bottled water will become an even stronger force among those who want to feel secure about the water their families are drinking. As more people learn that bottled water is a food product, highly regulated by the FDA, state authorities and the bottled water industry itself—through the IBWA Model Code—consumers will be even more comfortable with bottled water as their beverage of choice.

About the Author

Joseph K. Doss has served as president and chief executive officer 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. The IBWA is an authoritative source of information regarding all types of bottled waters. Founded in 1958, IBWA member companies account for more than 80 percent of all bottled water sales in the United States. IBWA works with state and federal governments, in concert with the IBWA Model Code, to set stringent bottled water standards for safe, high quality products. For more information, contact IBWA at 800-WATER-11 or visit www.bottledwater.org.

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

Water Industry Rises Through Downward Economy

By E.J. Fierko, Osmonics



The overall economy has been in decline for nearly a year and is now officially in recession. On the positive side, the water treatment industry should weather this period better than other industries. Water treatment companies that serve a broad range of industries are continually seeing that their products are being sought after as their technologies have advanced to the stage where quality, consistency and cost effectiveness are the norm and industry and consumers alike are recognizing the fact that better quality water for industrial applications and consumption now is available. Some of the biggest growth areas for the water treatment industry as a whole include bottled water, municipal and home point-of-use/point-of-entry systems and power production.

The bottled water industry has seen an increase in consumer demand for high quality drinking water. In the United States alone, the consumption of bottled water products has increased, on average, greater than nine percent per year during the past 10 years. Moving into 2002 consumption should continue to grow. As the world population grows and water resources steadily deteriorate, the industry will continue to see a greater consumer demand for high-quality water.

With recent regulations and general health concerns, the environment is occupying a prominent place in the forefront of consumer's minds. As a result, industries are looking for ways to reduce costs and improve production processes while minimizing the impact on the environment. For example, the investment in municipal applications is increasing as a direct result of the EPA drinking water regulations. Cities will continue to look to the water treatment industry to help adhere to these guidelines.

Consumer concerns about their water supply and possible bio-terrorism coupled with advancements in household system technology and affordability could drive homeowners to install water treatment systems. Municipal water treatment plants, aware of these threats, could accelerate upgrading their current processes to address this threat, meet recent tighter maximum contaminant levels (MCLs) for arsenic and comply with provisions of the updated Safe Drinking Water Act.

Another area that I see holding promise is the power industry. Deregulation is spurring growth in this market and plants

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are looking for the most efficient way to generate power and improve profits. By producing boiler feed and power generation water through mechanical treatment rather than by chemical treatment, many high-pressure boiler facilities have seen a six-month payback on the installed costs of a reverse osmosis system.

Trying to forecast 2002 economic conditions is a difficult proposition. My personal assessment is that the first quarter of 2002 will show very modest improvements. I believe that the economy could see solid growth in the second half. Interest rate cuts by the Federal Reserve should give the beleaguered economy a boost, while future government actions—most likely targeted at relief to industries, cities and citizens—could have an uplifting effect on the economy as a whole. The question is, when and how much?

Even with the slowdown of the economy, the water treatment market holds great potential. Knowing this, it is important for us to emphasize quality control and the manufacture of high quality products while focusing on service and support to reassure our customers that they are making a solid investment.

We all need to do our part by getting back to living our daily lives in a normal fashion and having confidence that this recent economic slowdown, after 10 years of strong growth and prosperity, is only a small setback to our bright economic future.

About the Author

Edward J. Fierko is the president and chief operating officer of Osmonics. Previously, Fierko held the position of president and

chief executive officer of EcoWater International, Inc., based in Glasgow, Del. Before joining EcoWater in 1987, Fierko was with General Electric for 23 years, serving as general manager of the Power Systems Management Division. Fierko is a former president of the Water Quality Association.

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Technologies Emerge Amidst Water Demand

By Ian Knapp, Alamo Water Refiners, Inc.



The year 2001 proved to be true to predictions in most areas, except for the loss of consumer confidence and business slow-down that exceeded expectations. The tragic events of Sept. 11th and the subsequent anthrax incidents could not be predicted, but they will have repercussions for all of us.

The safety of our drinking water has taken on a new significance in the last few months. We were concerned with cysts and organisms that had to be filtered out in the one-micron size. Now the concern is about bacteria and viruses that are too small to be filtered economically. Alternate disinfection methods are going to become more popular.

New technologies such as chillers, heaters and disinfection systems now are available in competitively priced systems. This could make the days of five-gallon water coolers in homes and offices short-lived. It soon will make more sense for the consumer to have a POU system with these advantages and for the dealer to have the recurring maintenance or rental revenue without the expense of a fleet of large bottle delivery trucks.

One area that has not grown as quickly as we anticipated is the use of POU/POE systems by small municipal suppliers to meet the more stringent government regulations. Perhaps the lower arsenic levels will be the driving force to encourage public water purveyors to work with water treatment dealers to address this and similar contaminant removal issues. Presenting a solution to small publicly or privately owned systems that shows proof of “best available technology,” return on investment calculations, performance bonds and service contracts, to name a few of the issues, is a different selling job than many dealers are accustomed to doing. This may prevent some from pursuing this market, or it may take longer on the sales learning curve before the successes become more noticeable.

The much-touted business slow-down and decrease in consumer confidence is offset by a growth in new home starts. Water treatment dealers, who know the best type of systems to treat the water in their area, can capitalize on this segment of the market to keep the sales levels up while other segments may be slower than usual. Working with the builders to offer a treatment package to each homebuyer will add value to the new home, confidence to the buyer and revenue to the dealer.

The times have changed for all of us in many ways, but people still need to have confidence in the water they use every day. This means that our business, whether it is in the residential, industrial or high-purity segment of the market, still will be a service to the public and one in which we can grow and benefit, too.

About the Author

Ian Knapp currently is president of Alamo Water Refiners, Inc., San Antonio, Texas, a

member of the Marmon Group. He has been in the water industry since 1977, with various companies. Since joining Marmon he has been president of two other businesses, Aqualytics, Inc., New Jersey, and Ecodyne Water Treatment, Inc., Illinois.

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

Being Prepared for What the New Year Brings

By Jorge A. Fernandez, Pentair Water Treatment



Most of us remain cautious with an undertone of optimism as we look forward to 2002. In general, I expect it to be a “good” year. As we see it, the perspective of “caution with optimism” makes sense.

Let’s see why. The residential housing market may be running out of some of the steam provided by lower interest rates and mortgage refinancing ... and yet we do not see this sector retracting into recession territory. Nor does the homeowner want to see clean, safe water diminish.

The commercial/industrial markets have suffered in 2001, but they have settled into a plateau where we expect them to stay for awhile. And yet, this can turn quickly for the better as the tactics of postponing new projects and maintenance activities can be sustained only for so long before they become impractical. Finally, on the larger water projects, the active level of inquiries and bidding continues ... so, at some point in time, these companies will have to turn to orders. We see market participants cautious but eager to turn optimistic.

In my opinion, 2002 markets will be best addressed via planning sales conservatively and expense controls aggressively. At the same time, we think that it is a smart strategy to develop the internal plans for a positive turn of events. For example, we are investing significant resources in a number of major new product initiatives with the confidence that the market in 2002 and 2003 will improve.

I think it also is fair to anticipate that profit margins hurt by more intense competition in reduced 2001 markets will not return to prior levels anytime soon. In fact, more erosion could take place as competition gets tougher in preserving market share. In our case, hard work continues to create opportunities for cost savings and we feel we are very well positioned to come out winning if a new round of margin erosion happens. Conversely, if the market expands once again, we will be in a

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position to reap the benefits of larger sales over cost-controlled basis.

We expect that retail activity by the major water treatment brands will show renewed activity in 2002. As a response to this and the tighter 2001 markets, I expect that manufacturers at all levels will try hard to create new opportunities to replace potential volume losses. I am seeing a lot of activity at our brands coming from customers who wish to reenergize their products and programs.

Finally, I anticipate that if the expected turn for the better does not come early in 2002, more firms will encounter cash flow problems. Some might fold as a result. Unfortunately, I then would expect to see less—not more—players by the end of 2002.

The message for all of us in the industry is that, more than ever, these are times to “recreate our own future,” by actively managing costs and generating the market opportunities that will drive us into the future.

About the Author

Jorge A. Fernandez is the president of Pentair Water Treatment. Fernandez joined Fleck Controls, a part of Pentair Water Treatment, in 1997. He has 21 years experience in industrial and consumer businesses including Whirlpool, Nordic Track and S.C. Johnson & Son, Inc. Fernandez earned a Master's degree from the Stanford University Graduate School of Business and a Bachelor's degree in accounting from the Buenos Aires University School of Economic Sciences.

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More Opportunities, Scrutiny for POU/POE

By Cecil Ray (C.R.) Hall



have a few predictions for 2002, which include the following.

- Water treatment will continue to be a growing, vibrant business.
- The channels of distribution of our products to the market will continue to blur.
- Technology will continue to make our products better and less expensive.

But those things can be said about nearly any year in the past 15, and the general theme of the above would be similar for many other industries in the world.

First, I will name two items I see as changing in our business during 2002 that we didn't foresee at the beginning of 2001.

- Our products will get more opportunities to be used as long-term solutions to customers' concerns with their water. Since many of our products are third-party certified to reduce and remove health-related contaminants such as arsenic, and they can be the low-cost solution to a community's water problems, we will see more projects use point-of-use and point-of-entry water treatment products to solve their problems. The upcoming demonstration projects (sponsored by AWWA and the U.S. EPA) will help reinforce the cost advantage, technological superiority and quick turnaround time we offer.
- Our businesses segment will come under more scrutiny now than in the past, because of the national concern about terrorism and using the water supply as a delivery vehicle for domestic terror. While this is a 'marketing tool' we don't want to use, the questions our customers are asking need to be answered truthfully and completely.

The entire country was affected by the Sept. 11 attacks. Here are the impacts I see of the tragedy.

- The attacks appear to have derailed a slowing economy. This has a negative impact on some segments of the water quality improvement business, mainly travel and high tech. Therefore, new hotel and restaurant construction has slowed, as has computer component manufacturing. These two markets are critical portions of the commercial and industrial water treatment business.
- The residential business, which is tied to new home construction in many markets, continues to rebound from September 11. Low interest rates make homes more affordable for more people, and many of the new customers our industry signs up are new movers and new homeowners.

As I said, next year will be an excellent year for the water treatment industry. Many new challenges await us, and if we focus on the positives, we will have even more success in 2002 than we had in 2001.

About the Author.

Cecil Ray (C.R.) Hall is an independent Culligan dealer with 150 employees in eight locations in Kansas, Missouri and Ohio. He also is the current president of the Water Quality Association. In addition, Hall is the current president of the Culligan Dealers' Association of North America (CDANA).

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