

world water

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Digital transformation in the water industry

Anue Water Technologies' CEO Paul Turgeon says that 2018 has been a very good year for the company's odor and corrosion control technology in the municipal wastewater market while new industrial applications of its sustainable ozone and oxygen treatment are leading an effort to scope out other opportunities in, for example, the food and beverage sector.

Demand for sustainable solutions drives new business

In an interview with *World Water* Editor-in-Chief Pamela Wolfe, conducted during WEFTEC 2018 in New Orleans, Louisiana, United States, held on September 29–October 3, Turgeon explains how Anue's business is growing in both municipal and industrial wastewater markets that are evolving toward sustainable, non-chemical solutions.

World Water ____ How has business been for Anue in the past year?

Paul Turgeon ____ Our business has continued to expand. In general, there's been an increasing market demand for more environmentally friendly and sustainable solutions in different municipal and industrial applications, which our products offer.

Typically we work through channel partners (agents) at companies who bring our ozone-oxygen technologies on to complement other products they distribute. We educate them and spend a lot of time helping them up the learning curve; they're our front line resource, really. We work with them at shows such as WEFTEC and co-op our resources to help them identify new prospects, so we help them sell the business. Because we're a small business, working with channel partners helps us to have more "boots on the ground," in other words, more coverage in the North American market.

WW ____ What is the main focus of your business in the municipal market?

Turgeon ____ We offer a strategy comprised of several non-chemical and chemical components to help municipalities solve significant problems with odor and corrosion in their wastewater collection systems. The problems are caused by sulfate-reducing bacteria (SRBs), which thrive in an anaerobic environment. SRBs produce hydrogen sulfide as part of their metabolic process. Hydrogen sulfide can be lethal to humans and causes a very corrosive and odorous situation. Our total solution includes treatment of lift stations, wet wells, and force mains. In lift stations, aeration and ozonation prevent the buildup of fat, oil, and grease (FOG) that would otherwise lead to further microbiological

problems. In force mains, injection of oxygen creates an aerobic environment, which is lethal to SRBs, hence preventing their growth.

WW ____ As a chemical engineer with extensive experience in the specialty chemical industry and as President and COO of BWA Water Additives until 2011, could you explain why your next career step was to lead Anue's sustainable, non-chemical business? In a way, this move reflects a major trend in the water and wastewater industry toward replacing or minimizing chemical treatment for more sustainable technologies.

Turgeon ____ Anue's focus is squarely on the megatrends I recognized as shaping the future of this market. That, combined with the company's unique proprietary technology, offers a great alternative to end users. I see the direction the industry is headed as it's being heavily influenced by regulatory trends, aging infrastructure, and systems operating beyond the original design capacity. Anue's technology offers a highly efficacious and sustainable option to treat problems with FOG, odor, and corrosion, which have been aggravated by these factors.

WW ____ From your experience in the chemical business, how do you compare chemical treatment to Anue's ozone-oxygen approach? What are the benefits of Anue's non-chemical treatment strategy?

Turgeon ____ We have a deep understanding of the operation and chemical treatment issues in municipal and industrial applications; our staff has an average of 20-plus years industry experience. Our technology uses the sustainable and elegant solution of both ozone and oxygen to displace the existing use of nitrate chemical products.

Anue's system approach offers high efficacy, an improved OSHA profile, less labor intensity, and an environmentally friendly solution. It eliminates the need for deliveries of chemical drums and tanks, labor trained to handle hazardous drums, and the need to manage OSHA regulations.



"I see the direction the industry is headed as it's being heavily influenced by regulatory trends, aging infrastructure, and systems operating beyond the original design capacity."

Paul Turgeon, CEO, Anue Water Technologies



Components of Anue Phantom Series. Photo by Anue Water Technologies



**E-Savr™
Pump Control
Panel.** Photo
by Anue Water
Technologies

Anue designs a custom unit engineered specifically for a site that completely displaces the need for chemicals and requires a modest initial capital investment for design, production, and installation. The overall return on investment is very good, with improved efficacy.

WW — The municipal market is typically slow to accept new, untraditional technologies. Is this a hard sell?

Turgeon — No, surprisingly not. Our sales process is to first understand the problems faced by the end users and then offer mobile demonstration units deployed for 1 to 2 weeks to demonstrate operational simplicity and both economic and efficacy benefits. We scientifically analyze and report results that demonstrate the value proposition. The sales process is accelerated when the technology can be viewed working onsite.

Upon successful demonstration and approval to move forward, Anue designs a permanent solution tailored to system needs and produces the product in the company's manufacturing facility in the Atlanta, Georgia, area.

Should the end user increase capacity post-installation, then we can offer a modular "bolt-on" capacity expansion to the existing system.

"We scientifically analyze and report results that demonstrate the value proposition."

WW — What are your strategic plans for expanding the business in 2019?

Turgeon — We started the business about 10 years ago. Our strategy is straightforward — produce high-quality systems and, with tailored world-class service, to assist municipal and industrial end users cope with the difficult challenge presented by FOG, odor, and corrosion. In 2017, we expanded our reach into Canada, which was a natural growth area for us and led to several new opportunities. In 2019, we plan to further expand our North American operations by adding new commercial staff and channel partners.

Our technology also works well in other applications such as food and beverage and oilfield applications, so we are planning in 2019 to commercialize and promote our technology for these sectors.

Nordstrom invests in sustainable water technology

Living in Seattle, Washington, US, with the Puget Sound on one side and Lake Washington on the other, and surrounded by beautiful coastal waters for most of his life, investor James A. Nordstrom, Chairman of the Board of Anue, says he has always been concerned about water quality issues. His early career started as part of his family's well established chain of luxury department stores — Nordstrom, Inc., but in 2000 he decided to pursue his passion in the water industry, which he recognized was ripe for new, sustainable technologies.

Nordstrom explains: "Technology has changed every industry. But water treatment had not undergone dramatic change. It seemed to me there were bound to be opportunities to provide more innovative solutions. What was, and still is, exciting is to look for new, innovative

ways to treat water and wastewater that really challenge established solutions, such as the use of chemicals. Because chemicals, even at low levels, can remain in the water after treatment and can be reintroduced into our natural water sources.

"So is there a more natural, sustainable way to treat wastewater, and is it something where we could be a leader in the industry? We looked carefully and found that there are so many ways to apply Anue's technologies and to lead the industry in a new, sustainable direction.

"It's been really exciting to see the progress we've made, how the marketplace is looking for smarter solutions, new applications, and where we can use telemetry and monitoring systems to benefit customers in terms of efficiency and efficacy."

Live demos of Phantom and Enviroprep systems at WEFTEC '18

Anue Water Technologies is a leading manufacturer of high-efficiency ozone and oxygen generation and injection systems for the elimination of odor, corrosion, and fat, oil, and grease (FOG) in municipal and industrial wastewater. Live demonstrations of Anue's patented Phantom and Enviroprep (EP) systems were conducted at WEFTEC 2018.

For use in collection lift stations, the Phantom Series provides point source odor elimination by infusing ozone into recycled wastewater to react with and remove hydrogen sulfide and mercaptans. It eliminates the need for perpetual chemical feed systems as well as the occurrence of ongoing corrosion and maintenance issues associated with vapor phase hydrogen sulfide. Current chemical treatment using calcium nitrate products requires special handling and storage. These chemicals are expensive, hazardous, and have perpetual and increasing annual costs.

The E-Savr™ Programming feature allows the user to vary the frequency and duration of the Phantom's duty cycle to address the varying odor levels that naturally occur at high and low flow periods in the collection system each day. These programming options match the odor control treatment to the problem, which reduces operational and maintenance (O&M) expenses while achieving maximum performance.

The Enviroprep System conditions wastewater for lift stations and sludge vaults. Its mechanical action keeps wells and vaults free of FOG and can eliminate the need for repetitive clean-out. EP-1100A systems function by recycling wastewater through the system and returning it back into the well. This technology significantly reduces or eliminates the need for vacuum truck and manual confined space clean-outs, providing immediate operational savings and improved safety.



Anue mobile treatment trailers are being prepared for onsite deployment. Photo by Anue Water Technologies