

world water

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Global problem, local response

The growing success of Water Environment Federation's International Pavilion Program has opened up greater opportunities for companies to explore new markets by exhibiting at major water/wastewater exhibitions held worldwide.

WEF gateway to the global market

In 2015, WEF Pavilion exhibitors will travel to the Philippines, United Arab Emirates, China, Brazil, South Africa, Colombia, Netherlands, and Mexico.

Water Philippines 2015 Expo, to be held March 25-27 in Pasay City, Philippines, is the country's foremost international water supply, sanitation, industrial wastewater treatment, and purification event. More than 6,000 visitors are expected to attend the expo that includes 350 exhibiting companies from 28 countries. US companies – Bio-Microbics, Inc., Proco Products, and Pure Technologies – will be exhibiting their products and services in the WEF Pavilion as part of this expo. Some of their innovations on display at Water Philippines are described below.

Advanced winery wastewater treatment for water reuse

Bio-Microbics' advanced water treatment systems helped a vineyard in the growing city of Garzon, Maldonado, Uruguay to treat its wastewater onsite for reuse. The South American winery market represents a growing market for wastewater treatment solutions and reuse opportunities, such as irrigation water for vineyards, recycled water for dust control, processing area wash-down water, or producing highly treated effluent for disposal to protect vital habitats and groundwater resources.

Unlike residential wastewater, winery wastewater usually does not contain pathogenic bacteria in the waste stream; however, biochemical oxygen demand (BOD) and total



Bio-Microbics' solutions helped a winery in Uruguay treat high-strength wastewater.

suspended solids (TSS) are found in significantly higher concentrations, as much as forty times as high as household wastewater. Typically, the BOD could be as high as 12,000 mg/L BOD and 6,000 mg/L TSS during harvest (crush) season activities.

Bio-Microbics distributor, Rumbos Ingeniería y Servicios (RIS) provided various treatment solutions to meet the vineyard's specific needs from screening the high-strength wastewater with an unusual amount of BOD and sugars to also adding additional aeration for better sludge management. The system was designed to treat 70 cubic meters per day (m³/d) with 7,000 BOD, which is equivalent to a 1,633-m³/d wastewater treatment plant. RIS met the requirements of treatment levels by using the Bio-Microbics' BioBarrier[®] HSMBR[®] (High-Strength Membrane BioReactor) and extra aeration using a supplemental BioAeration Grid in a custom configuration for this specific application. The vineyard owners were impressed with the system's operation and maintenance, according to RIS.

BioBarrier Membrane BioReactors (MBR) and BioBarrier HSMBR are wastewater treatment systems

that use microfiltration/ultra-filtration membranes and a BioAeration Grid with a robust, suspended growth bioreactor. Typical uses for the BioBarriers include single-family/multi-family residential, small communities, and commercial properties for onsite wastewater treatment, water reuse, and direct discharge applications.

When used with the SaniTEE[®] Effluent Screening Device, other advantages of these MBRs over conventional processes include small footprint, easy retrofit, and upgrade of old wastewater treatment plants. The BioBarrier MBR and HSMBR systems can produce effluent of high quality enough to be discharged to coastal, surface, and brackish waterways or to be reclaimed for urban irrigation.

The system went through a one-year test in both Canada and the United States, and another nine-month European Union test without maintenance or cleaning to remove up to 99.9 percent pollutants from the wastewater, resulting in a wide soil permeability range for a variety of direct discharge, pretreatment, or water use applications for various flow ranges. Bio-Microbics, Inc. is based in Shawnee, Kansas, United States. *Stand F116*

SmartBall detects leak within .5 meter

Pure Technologies, a world leader in the development and application of innovative technologies for inspection, monitoring and management of large-diameter water and wastewater pressure pipelines, is helping utility operators in many countries to mitigate pipeline deterioration and maximize capital budgets for rehabilitation and replacement programs. The company is based in Alberta, Canada.

Through the use of non-destructive leak detection technologies, Pure helps its utility partners accurately locate leaks on critical trunk mains. This allows for immediate repairs that reduce non-revenue water and prevent leaks from leading to failure. The SmartBall[®] leak detection tool is a free-flowing solution for long inspection distances. The Sahara[®] platform is a tethered solution that provides operators close control and is useful for leak detection surveys in urban environments. Both tools are capable of locating very small leaks that are not identified using most leak detection technologies and have high location accuracy.

In March 2014, the company completed a successful leak detection survey on behalf of Mancomunidad Comarca de Pamplona (MCP) in Spain. Pure assessed one of MCP's 400-



SmartBall leak detection tool available from Pure Technologies.