

Hanging up the wrenches: What do two retired plumbers in Seattle do for an encore?



Daigo Ishiyama (center), engineer and industrial designer at American Standard, researched and field tested the SaTo sanitary toilet pan, invented to improve sanitation and reduce the transmission of disease from pit latrines in Bangladesh. (Photo: American Standard Brands)

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Two lifelong plumbers and members of several industry associations — including IAPMO, Union Local 32, and the World Plumbing Council — Domenico DiGregorio and Fred C. Volkers of Seattle, were inspired to

take humanitarian action. They started Plumbers Without Borders in 2010 to help address and solve the global crisis of water and sanitation poverty by utilizing resources in abundant supply: plumbing skills and knowledge.

They credit their inspiration to fellow plumber, Jed Scheuermann, who had dedicated many personal vacations in pursuit of helping people who had little or no access to safe water or sanitation. Scheuermann, a family man, plumbing instructor and trainer working for his local union in Oregon, still somehow found time to venture to places where many dared not. It was his then-recent trip to Haiti, following the devastating earthquake of 2010 and featured in IAPMO's OFFICIAL magazine, which sparked the beginning of PWB.

Nearly every profession had representative ambassadors working for peace and progress toward global development. Engineers had Engineers Without Borders, doctors had Doctors Without Borders...there was Teachers Without Borders, Architects Without Borders, etc. So, why not Plumbers Without Borders?

The World Plumbing Council and other industry organizations had already been working to mobilize the industry and marshal available resources toward achieving global development goals. DiGregorio and Volkens realized the potential positive impact the world's plumbers could make, harkening back to the old adage "plumbers protect the health of the nation."

The phrase has been used for decades, made famous by the iconic American Standard poster, yet the general public didn't think of plumbers as having anything to do with personal, much less global, health.

DiGregorio and Volkens had a clear vision of the under-utilized collective power within their industry when they embarked on one of their most important life journeys. They have never looked back with anything less than excitement and resolve.

After operating on a shoestring and self-funding the organization the first few years, PWB forged its first corporate sponsor/partnership with American Standard Brands, which believed and invested in the humanitarian mission. In 2014, thanks to American Standard's generous support, PWB was able to launch an online database with automated functionalities that enabled the organization to accelerate building its volunteer network.

Historically committed to helping eradicate diseases caused by unsafe sanitation practices and inadequate facilities in developing countries, American Standard answered a Gates Foundation challenge to "Re-invent the Toilet" by employing the expertise of its design and engineering teams to create a product that would help stop the spread of disease and easily adapt to conditions in the developing world. The result was the innovative SaTo (an abbreviation for "safe toilet"), a cost-effective, sanitary toilet pan that employs ingeniously simple mechanical and water seals to close off

pit latrines from the open air, thereby reducing the transmission of disease through direct and indirect contact with waste. Its ingenuity won the SaTo a substantial grant from the Gates Foundation.

One of PWB's earliest supporters, and the first volunteer Master Plumber to venture abroad to support the organization, was Fred C. Schilling, Jr. of Florida. Schilling soon became the vice president of PWB and has, to date, completed 10 trips to Haiti. There, he helped improve the lives of thousands of Haitians and established the groundwork for advancing the plumbing curriculum in a local community vocational college, HaitiTec.

Working with the support of American Standard and LIXIL Water Technology Americas business group, Schilling installed the first SaTo sanitary toilet pan in the Western Hemisphere in a home in Haiti, effectively closing off an in-home open latrine and eliminating toxic odors for the residents. His former HaitiTec students, having been initially trained by Schilling, have now installed 1,000 SaTo pans across the island nation, helping improve health and lives for thousands of Haitians, using their plumbing and construction know-how. Globally, American Standard/LIXIL has one million SaTo products in distribution in countries including Kenya, Uganda, Rwanda, Haiti, the Philippines and India, providing five million people access to safe and hygienic sanitation.

PWB launched its initial community efforts in its own backyard in the Pacific Northwest, facilitating numerous local projects that supported non-profit organizations, such as Habitat for Humanity, Helping Link and Step by Step. In addition, it generously volunteered its expertise when called to other parts of the world:

Sierra Leone

In Sierra Leone, a region still recovering from Ebola, PWB had the good fortune to connect with Olusegun Adeogun, a plumbing engineer, teacher, husband and father of two beautiful children from Nigeria. He accepted the daunting challenge of lending his critical plumbing expertise to a major hospital upgrade that would enable continuing medical services for hundreds of thousands of people dependent on that facility for survival.

Adeogun's generous willingness to travel from Nigeria to Sierra Leone was not only a testament to his humanitarian heart, but a validation of PWB's mission. As its volunteer database grows, PWB is closing the geographical distance gap between skills and ongoing projects.

Haiti

Returning to Haiti several times, PWB vice president Schilling recently collaborated with multiple partners to install a new water purification system, serving hundreds of children, staff and nearby villagers at a remotely-located school. This project was supported by the Center for Environmental Justice and Sustainability at Seattle University, and Engineers for a Sustainable World, led by Dr. Phil

Thompson. Joining several Haiti Tec students and staff, Jack McNamee, a volunteer with the Andrea Bocelli Foundation, coordinated the field work, and together this collective effort will improve lives for thousands of residents well into the future.

Shortly before Hurricane Matthew hit Haiti, PWB helped support Build Health International by connecting two enthusiastic plumbers from the Northwest, Roberto Martin and James Donovan, to assist with a major hospital project in Haiti. They were warmly received and appreciated by the BHI team, and came away gratified to know their skills would make a difference for thousands of Haitians whose health and lives depend on this hospital.

In the dramatic aftermath of Hurricane Matthew, BHI has now re-deployed their teams to assist with the most urgent of needs, such as road-clearing, and food and medicine distribution. PWB continues to support BHI, as well as Haiti Tec, as they grapple with the enormous challenges of this devastation.

Ethiopia

In 2013, PWB Co-Founders DiGregorio and Volkers traveled to Ethiopia with a group of volunteer doctors and nurses from Seattle Alliance Outreach. Their mission was to help design solutions for upgrading the plumbing system at the Zewditu Hospital in Addis Ababa, as well as establish a non-profit dialysis clinic.

What they saw at the hospital would be unthinkable in developed countries. There were no working faucets in the operating room pre-wash area, forcing doctors to use water from five gallon buckets poured over their hands prior to surgery.

DiGregorio also observed several risks for cross-connection problems. “Compare that to the U.S. where nearly every municipality has a cross-connection/backflow prevention program in place. The solution wasn’t just to fix the problem but also to teach local personnel how to recognize and eliminate the potential cross-connection contamination hazard,” stated DiGregorio.

“Few lay people understand how plumbing is designed from simple to complex, because they rarely see the drainage, waste, venting and water distribution systems hidden by walls, floors and ceilings,” DiGregorio says. “Even fewer people realize that ultra-hygienic systems like medical gases, including oxygen and anesthesia, require specialized piping installed by certified medical gas piping plumbers.” In most U.S. states, the path to become a licensed plumber, from apprentice to journeyman, requires between 8,000 and 10,000 hours of practical field work before even being eligible to apply for a plumbing license.

Continuing the Mission

There's been a resounding interest from plumbers and pipefitters around the world who want to participate in this global effort supported by PWB. Plumbers who have worked in developing countries are often heard saying: "Nothing can prepare you for the poverty you'll see." This may sound adventurous to some, but it's certainly an eye-opener for most.

PWB is resolutely focused on building a global database of volunteer plumbers, industry leaders and organizations committed to increasing access to safe water and sanitation.

Indeed, education and training is still one of the single most effective ways of creating the foundation for healthy and sustainable communities. With that in mind, PWB is collaborating with industry leaders to develop a series of educational modules which can be utilized throughout the world.

"Plumbing, pipefitting, and mechanical professionals are stewards of human health," DiGregorio says. "By engaging the collective consciousness in our industry, and collaborating with like-minded efforts, both locally and globally, PWB invites you to join the cause, and add your skills to helping improve lives for millions."

Carmella DiGregorio is the secretary/treasurer of Plumbers Without Borders. Please visit www.plumberswithoutborders.org for more information.

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