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Oahu Firm Exports Low-Cost System for Making Safe Drinking Water

"Is it safe to drink the water?"

A common question for tourists going off the beaten path, but what if the answer is negative and off the beaten path is where you live? There are an estimated 1.2 billion people who, according to the World Health Organization, must get along without access to safe drinking water.

They can expect an average of two illnesses a year per capita from water-borne diseases, and more than five million deaths a year, many of them children. Despite an annual investment of \$12.5 billion annually in water supplies for developing countries, the United Nations says the number of people going without safe water is expected to climb to more than 2 billion in the next 20 years.

Safe Water Systems of Honolulu, which has just received the 2003 Exporter of the Year Award from the Small Business Administration, has invented a unique technology called Solar Water Pasteurizers -- that uses the heat of the sun to make water safe to drink. Pasteurization destroys disease-causing microorganisms by heating foods or liquids to 55 degrees Celsius (131 degrees Fahrenheit) for several minutes.

Safe Water Systems President Will Hartzell said the company now has about 1,400 of its units installed in 48 different countries, including Central America, Africa, Southeast Asia and India. "There is no one in commercial production with units similar to ours," he said. "There is one company making a plastic bag, at low cost, with a useful life of a year or two. Our strategy has been to manufacture a product with high-quality materials with an estimated 25-year-life. There is nothing to wear out or break down and the only moving part (the thermal control valve) has been tested beyond one million cycles."



*Oikokola village,
near Arusha, Tanzania*

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Events

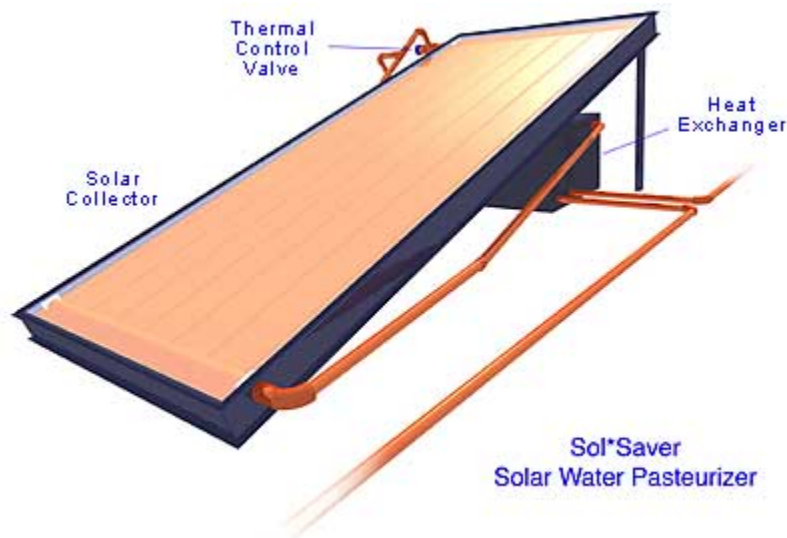
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October 2003

Sun	M	T	W	Th	F	Sat
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Date	Event
10/10-10/11	7th Biennial SOEST Open House: Science for a Sustainable Future
10/11	Aloha Chapter of the Society for Technical Writers - Technology Workshop
10/12	Flavors of Technology Awards Gala
10/13-10/17	LavaCon 2003
10/13	FastTrac Technology Entrepreneurship Development Program



"One of the biggest benefits is that our units provide safe drinking water for as little as \$0.50 (fifty cents) per person per year," Hartzell said, adding that even very poor people pay much more than that in many areas.

Three differently sized Solar Water Pasteurizers are now on the market. The large, community-sized unit costs about \$3,000 for a water-heating collector that is four feet by ten feet. It can supply about a thousand liters (250 gallons) of water on a sunny day, enough for 500 to 1,000 people a day. Multiple units can be installed to produce larger volumes, and an optional backup burner uses conventional fuels, such as wood, in order to operate at night or on cloudy days.

"Our units are usually installed by the organizations we send them to or by an independent contractor on their behalf," Hartzell said. "A crescent wrench and Phillips screwdriver are all the tools that are needed. With the large units, cold water is controlled by the thermal control valve that opens at about 79 degrees Celsius (175F) degrees and closes at about 76 degrees Celsius (170F). The water flows into a storage tank and is usually consumed rapidly. Chlorine can also be used to keep it pure."

Hartzell said the systems typically find applications in villages, schools, health clinics, orphanages and hospitals. A smaller



*Maasai School for Girls
Monduli, Tanzania*

system designed for families or small groups will disinfect 13 to 26 liters (3.5 to 7 gallons), and is portable.

Safe Water Systems was co-founded in 1999 by John Grandinetti, a solar water professional who invented the products, and by Hartzell, who has more than 20 years of administrative, sales and marketing experience in the solar industry.

The company's headquarters are at the Manoa Innovation Center, a high-tech business incubator on Oahu, where three full-time employees and a research and development director oversee business activities with more than 60 distributors worldwide. Contractors on the U.S. Mainland manufacture the units.

In addition to the SBA Exporter of the Year award, the company also was recognized last November with an Export Achievement award from the U.S. Department of Commerce that was presented by Congressman Neil Abercrombie.

Safe Water Systems recently shipped pasteurizers to Nigeria for rural schools, Ghana for remote villages, Cambodia for an orphanage, Pohnpei for rural schools, and Uganda for a church community. New projects include proposals for sites in Honduras, Haiti and South Africa.

Hartzell said the firm's objectives now are to increase sales by closing current project proposals and to reach new customers by direct contact, trade shows, Internet web marketing, and video presentations. Customer segments include housing and construction companies, non-governmental organizations, U.S. and foreign government health and aid agencies, U.S. and foreign military groups, corporate sponsors, charitable foundations, commercial resellers, and missionary organizations.

Photographs courtesy of Safe Water Systems.

For more information about Safe Water Systems, visit their website at www.safewatersystems.com, or contact:

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