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Work Experience

2003 – present. President and CEO Blue Future Filters, Inc, Bellingham, Washington. Manufacturer of package plant slow sand filters, iron filters, wastewater systems. 2014 Governor’s Emerging Trader of the Year.

1996 - present. Owner, Blackburn and Associates, Custer, Washington. Research, design, consulting, and development of sustainable water treatment technologies including slow sand filters, iron filters, roughing filters, wastewater treatment, piping and control systems.

1994 - 1996. Vice President of Research and Development, OASIS Corporation, McKinleyville, California. Design and development of appropriate technology, water treatment systems for rural U.S. and developing countries.

1983 - 1994. Owner, Lost Art Systems, McKinleyville, California. Firm specializing in water supply and treatment equipment, sales, and installation. Worked extensively with pumps, filters, heat exchangers and various types of control equipment.

1979 - 1984. Marketing and Sales Manager, Thrifty Supply Company, Eureka, California.
A wholesale plumbing and heating supply company serving the water works industry.

1975 – 1979 Manager, Building Materials Center, McKinleyville, California.

Education

Master of Science , Environmental Systems-International Development Technology, Department of Environmental Resources Engineering, Humboldt State University, Arcata, California, 1995. Emphasis of course work in water and wastewater related engineering, water and wastewater testing, international health, data collection and analysis, project development, diffusion of innovations, risk analysis, implementation and evaluation of projects.

Thesis/Project -*Slow Sand Filtration of Drinking Water: Introducing an Appropriate Technology to Rural Southern Mexico*, 1993-1995.

B.A., Humboldt State University, Arcata, California, 1974

Slow Sand Filtration Workshop, American Water Works Association, Salem, Oregon, September, 1995.

A Short Course in Created Wetlands for Wastewater Treatment, Humboldt State University, 1998.

Milestone Professional Activities.

Design and development of 290,000 gpd slow sand filter system, Kenwood, Oklahoma, Cherokee Nation, 2013.

Peer reviewer, USEPA Small Business Innovation Research Grants (SBIR), 2012.

Supply, logistics, and on-site training, modular slow sand filters for Safe Water Network, Lake Volta, Ghana, 2012

Consulting on cutting edge water and wastewater systems development with a goal of "0" discharge, New Vista Villages project, Novatech Corp, Salt Lake City, Utah. 2009-2011.

Development of bolted tank slow sand filter for Volcano National Park, Hawaii, in association with CST Industries, Kansas City, KS. 2010

Development of large bolted tank aeration precipitation filters for coal bed methane treatment water, in association with CST Industries, Kansas City 2010.

Development of slow sand filters in foldable geomembrane tanks. In association with Seattle Tarp, Seattle WA. 2010

Development and piloting of 150 gpm treatment system for processing coal bed methane water for stream discharge to EPA/DEQ standards. Gillette Wyoming 2008-09

Iraq reconstruction. Awarded \$6.1 million contract U.S. Army Corps of Engineers for slow sand filters supply and coordination of installation for 36 villages along the Euphrates River, Anbar Province, Iraq, May 2005.

Tsunami relief. Supplied 200 village size slow sand filters and training following Christmas Tsunami 2005, Sumatra Indonesia.

Utilities Committee, The Sea Ranch, California. Served on committee overseeing water and wastewater utilities for community of 1,500 homes, 2003-2005.

Consulting for House of The Children, Cusco Peru. Design and supervision of construction for two community slow sand filters, wastewater treatment systems and associated equipment, Manu region, Peru, 2003-2008

Design and fabrication of hydraulic assemblies for Liberian Refugee Camp, Accra Ghana as part of pilot project proposal to Ghanaian Government. 2003

Authored slow sand filter design, operation, and maintenance manual in English (translated to Spanish) for U.S. Army Corps of Engineers, Southern Command. 2002

Design, development, manufacture, consulting on hundreds of slow sand filters, iron filters, roughing filters in 20 countries for residential, NGO, national parks, agriculture, industry, schools refugee camps, orphanages 1995-present.

Input on modular slow sand filters for USEPA [The USEPA Small System Compliance Technology List for The Surface Water Treatment Rule](#) (slow sand filtration is listed on page 24), EPA 815-R-97-002 August 1997.

Articles and Papers

Affordable Compliance for Small Systems: Slow Sand Filtration in the 21st Century.
Humphrey Blackburn, Blue Future Filters, Inc
Terry Stellema, CST Industries
American Water Works Association, ACE 11, Washington D.C. June 2011

*High Quality Water And Sanitation For Children Of The Peruvian Rainforest:
A Success Story*, presented to the International Water Association Development Congress, Mexico City, November 2009.

Improved Techniques and Materials in Slow Bio-filters (SBF) and Implications for Meeting Millennium Goals, Water Executive Forum, Pennsylvania, PA April 2007.

Summary of Performance Characteristics Of Blue Future Filters Slow Sand Filters, July 25, 2006

Slow Sand Filter: Sustainable Option For Small Communities, Everything About Water Magazine,
H. Subramaniam editor, New Delhi, India, March-April 2002

The ABCs of Slow Sand Filtration, Water Technology Magazine, September, 1998.

Low-Tec Modular Water Treatment Systems for Rural Applications, Water Conditioning and Purification Magazine,
January, 1997.

Get The Upper Hand with Slow Sand, Water Technology Magazine, April 1997.

Slow Sand Filtration. California Rural Water Association Journal, spring 1995.

A.T. in Chiapas. The AT Journal, Publication of the Campus Center for Appropriate Technology, Humboldt State University, Arcata, California. Fall 1992.

Awards and Honors

World Trade Club of Washington, 2014 Governor's Emerging Trader of the Year.

USAEP/NASDA Environmental/Energy Technology Fund Grant from U.S. Asian Environmental Partnership a program of the U.S. Agency for International Development and the National Association of State Development Agencies.
1996.

Scholarship, Research, and Creative Activities Award from California State University System. Grant used to install water supply and filtration system in Mayan Highlands based on graduate thesis project, Chiapas, Mexico 1993.

Patents

Patent pending. *Control tank apparatus for turning any water tank into an effective slow sand filter.* 2012

US Patent- *The SSF/x Slow Sand Filter.*

Patent pending. *Perlite slow sand filter.*

US Patent. *Apparatus and Process for Treating Coal Bed Methane Water.* In association with Columbian Techtanks, Kansas City KS.

Essential Skills

Knowledge of pumps, control systems, water treatment systems, wastewater (municipal and rural), treatment wetlands.

Water, wastewater utility operations and policies.

Knowledge of electrical systems for control and power. Wiring, switches, contactors, relays, transformers, photo-voltaic, batteries, specifications and codes.

Knowledge of PC and Macintosh computer platforms. Spreadsheets, word-processing, multi media, statistical methods, CAD.

Knowledge of water related public health issues. Epidemiology, tropical diseases, dose response, risk assessment, planned change, diffusion of innovations.

Knowledge of laboratory procedures for analysis of water and wastewater including, BOD, coliform (MPN and membrane), spectrophotometer, mass spectrograph. Statistical analytical methods. data collection, experimental design.

Knowledge of methodology of meetings and seminars, facilitation, information, dissemination, training, use of media.