



By Benjamin H. Grumbles

Innovation & the business of water go hand in hand

world wide wet

Recent events remind me how water connects us, technology informs us, and innovation delivers us from stagnation.

First: World Water Day, March 22, underscores the resource's life-and-death linkages to health, sanitation and security. The U.S. Water Partnership (USWP, www.uswaterpartnership.org) facilitated two meetings in Washington, D.C., in honor of the day and to advance the global cause. On March 20, in the inspiring and beautiful U.S. Institute of Peace, supporters gathered to discuss access to safe water and sanitation, integrated and efficient water resources management, governance, and the increasing threat of conflict over water.

"All water is local," except when it is not—such as when the resource crosses boundaries or when policy impacts move from individual neighborhoods to entire nations. Two hundred and sixty river basins in the world are shared by two or more countries. (In the U.S., 10 states border the Mississippi River and a total of 31 states are within the Mighty Mississippi's drainage basin.) Think regional planning and cooperation.

Think global security as well. According to an Intelligence Community Assessment, requested by the Department of State and written primarily by the Defense Intelligence Agency: "During the next 10 years, many countries important to the U.S. will experience water problems—shortages, poor water quality or floods—that will risk instability and state failure, increase regional tensions, and distract them from working with the U.S. on important U.S. policy objectives. Between now and 2040, freshwater availability will not keep up with demand absent more effective management of water resources. Water problems will hinder the ability of key countries to produce food and generate energy, posing a risk to global food markets and hobbling economic growth. As a result of demographic and economic development pressures, North Africa, the Middle East and South Asia will face major challenges coping with water problems."

Knowledge Is Power

"Wet diplomacy," my term for soft diplomacy with water assistance and American know-how rather than guns (or butter), advances national security and economic interests while boosting humanitarian and environmental efforts around the world. Since its launch in 2012, the USWP has helped to coordinate and support efforts among key federal agencies such as the Department of State, U.S. Agency for International Development, U.S. Environmental Protection Agency (EPA), Army Corps of Engineers and U.S. Department of Commerce.

Second: Information and communication technology can engage and enlighten for smarter, strategic water decisions, particularly in an era of global climate change. Utility, resource and regulatory managers are learning the value of SCADA, remote

sensing and smart water metering. American Water's research and development program won the 2014 U.S. Water Prize for work involving, among other things, acoustical leak detection, automated meter reading and advanced metering infrastructure. Mobile apps for water testing, data sharing and analysis are all entering the World Wide Web and watershed governance circles.

The Digital Energy & Sustainability Solutions Campaign, www.dessc.org, which includes some of America's most influential information and communications technology companies such as Intel, is supporting efforts to advance "precision conservation"—converting big data to actionable information for more strategic management of water and land with real-time monitoring tools and user-friendly apps. The Chesapeake Conservancy, www.chesapeakeconservancy.org, is one of the leaders, partnering with CEQ, Intel and several others in testing precision conservation as part of the Obama Administration's new Climate Data Initiative, announced on March 19, 2014.

Third: The business of water and the power of innovation go hand in hand. This was a major theme at the U.S. Tech H2.O World Water Day event at the U.S. State Department on March 21. Water is a human right, but it also is a costly endeavor (and a profitable one, under the right conditions). It takes a lot of money, energy, labor and material to sustain water's support systems. Experts like Steve Maxwell, in his 2014 Water Market Review, cite estimates of the annual global water market at \$550 billion, with \$150 billion in the U.S. alone. Does anyone doubt those numbers will continue to grow, particularly in segments involved in reclamation and reuse, desalination, and the reinvention of decentralized, off-grid systems and toilets?

A Small Business Administration (SBA) official reminded the audience at the U.S. Tech H2.O summit that America has 28 million small businesses, an impressive number of entrepreneurs and technology innovators by any count. How many are involved in the noble pursuit of clean, safe and secure water? The number should be tracked more closely. Water technology clusters, supported by the Department of Commerce, EPA, SBA, and many academic institutions and NGOs, are becoming breeding grounds for entrepreneurs with creative and innovative solutions. Watch them grow.

All water is local and all water is beyond local. Just ask the blue planet and surf the World Wide Web if you don't believe me. **WWD**

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