

FACT SHEET: Water and the Water Business

Global

- According to the World Health Organization, water scarcity affects *every continent* and affects *4 out of every 10* people.ⁱ
- Two-thirds of people on the globe may be living in water-stressed conditions by the year 2025, if present global consumption patterns continue.ⁱⁱ

USA

- Demand in the US has *tripled* in the past 30 years while the population has grown only 50%.ⁱⁱⁱ
- 20% of clean water is lost due to leaks.^{iv}
- Over 80% of US waterways are contaminated by medications.^v Current water treatment systems are not designed to filter out new micro-pollutants, such as aspirin, caffeine, animal growth hormones and other emerging contaminants.^{vi}
- California has declared a drought. Gov. Schwarzenegger said Californians face mandatory water rationing if they do not drastically reduce consumption.^{vii}
- Up to \$1 trillion is needed to rebuild America's aging water infrastructure (Goldman Sachs)
- Over 50% of America's groundwater is polluted. (CNN)
- States and cities are unprepared for water challenges that are only expected to grow more severe: in 2007, 40% of states suffered droughts and over 70% of states will incur water shortages by 2013. (EPA)
- Major water sources for millions of Americans are in jeopardy: there is a 50% chance that Lake Mead, a key source of water for 25 million people or approximately 10% of the US population, will run dry by 2021. (Scripps Institute)
- Over the last 25 years, droughts have killed more Americans than any other U.S. weather disaster and have caused \$150 billion in damage nationally. (Dept. of Commerce)

Price: (Base rate, residential, volume only, July 2008, per 1,000 gallons) San Francisco (\$3.84), Las Vegas (\$1.26)^{viii}

Use: Domestic m³/cap/yr: US (203), UK (40)^{ix}

Water & Food: An estimated 3,000 liters (793 gallons) of water per person per day is required to produce food – 1,000 times what we need for drinking.^x

Water & Energy: Moving and treating water uses 19% of California's electricity and 30% of its natural gas.^{xi}

Water & Health: Water-related diseases are the leading cause of child death (4,500 per day)^{xii}

Water & Security: UN Sec. Gen. Ban Ki-Moon warns many of the world's conflicts are fueled by water shortages.^{xiii}

Why isn't more being done today to address critical water problems?

- *Failure by the for-profit sector:* A pervasive lack of awareness of water problems and the opportunity they provide for top entrepreneurs and investors means few innovators and funders focus on water. In addition, water solutions often face difficult paths to market. Today, less than 0.5% of venture capital funds water entrepreneurship.
- *Underserved by the nonprofit sector:* The water crisis has been broadly under-served by the nonprofit sector because activity: 1) Focuses on developing countries, not both developing and First-World countries, 2) Relies on philanthropic and policy-based solutions, not inventive commercial solutions, and 3) Lumps water with other social or clean energy initiatives.

What is the opportunity?

Imagine H₂O solves the "market failure" for innovation in clean water and sanitation by:

- Defining prize categories which focus attention on market opportunities that can be sustainably funded;
- Holding our annual prize competitions to select the best solutions to critical water problems, and in future years, holding prize competitions for innovations in water policy, and youth prizes for the next generation of water innovators and leaders;
- Providing a go-to-market vehicle by incubating competition winners to help them reach market;
- Creating an ecosystem for water innovation, a virtual Silicon Valley for water, allowing stakeholders to connect and support each other.

Why is there a market failure?

- The groups that we rely on to fund key innovation aren't getting the job done for water.
 - Federal funding has actually declined 24% from 2001-2007.
 - Less than .5% of venture capital goes to fund water innovation. Water has been largely left behind as angels and venture capitalists have funded many breakthroughs in other clean technology sectors. (Source: CleanTech Capital Group, LLC: Clean-Tech Investment by Segment '99-Q2'06)
- There is minimal awareness of the First-World water problem. This is in part because water seems to be free when we turn on our taps, but really it costs us lots of money in taxes because water is heavily subsidized. So

compared to energy, where we can all see the price of oil and gasoline in the headlines, there's no recognition of the need for innovation.

- Because there isn't much attention to the problem, there isn't much attention being paid to the corresponding opportunity in solving some of the water problems. So there aren't many entrepreneurs and innovators focusing on water. Universities like Harvard, MIT, and Stanford have almost no R&D work ongoing in water because they're focusing on other problems.
- This is exacerbated by the lack of a strong community focused on making it easier to create and support innovative solutions to water problems. If you're an entrepreneur with an idea for an energy solution, you know everyone will listen to you, and you know where to get recognized. If you have a water idea, just connecting to people who can help you is an enormous endeavor.

Imagine H₂O aims to offer opportunities for and solutions to these problems.

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i World Health Organization, <http://www.who.int/features/factfiles/water/en/index.html>

ii GEO-2000: Global Environment Outlook. *"The State of the Environment: Freshwater"*, Nairobi, United Nations Environment Program, 1999.

iii Goldman.

iv U.S. EPA Clean Water and Drinking Water Infrastructure Gap Analysis, 2002

v United States Geological Survey. *"Emerging Contaminants in the Environment"* <http://toxics.usgs.gov/regional/emc/index.html>

vi Goldman.

vii The Associated Press. *"Schwarzenegger Declares Drought in California"*, June 5, 2008
<http://ap.google.com/article/ALeqM5jRq52nOBAO6RNu2DFELz1lyhiOXAD913QTSG0>.

viii SF Public Utilities Commission, Las Vegas Valley Water District

ix www.worldwater.org/table2.html

x Dr. Colin Chartres. *"Forgotten Link Between the Water and Food Crisis"*, Science Alert, June 24, 2008.

xi California Energy Commission, November 2005 CEC-700-2005-11-SF

xii UNICEF

xiii UN News Center, February 6, 2008