Water ReUse

The 21st Century Opportunity

Doug Pushard
HarvestH2o.com
doug@harvesth2o.com

Water Rights Tear at an Indian Reservation - NY Times 4/22/13

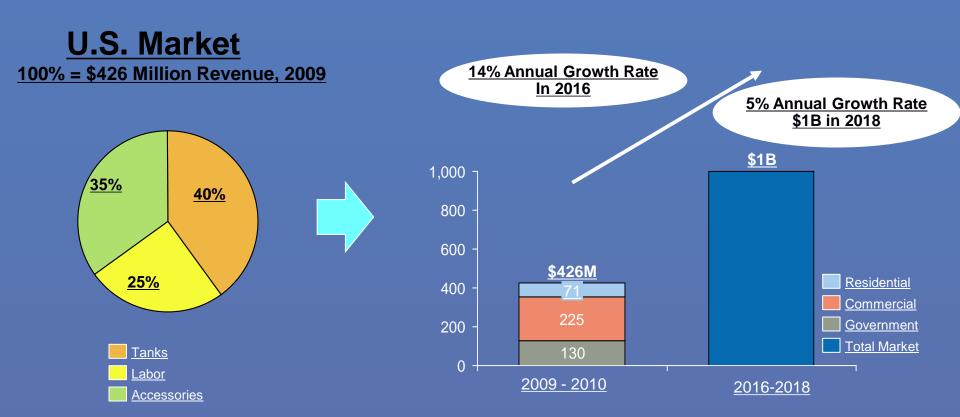
"Water is the oil of the 21st century."

Andrew Liveris, CEO Dow

Texas files water lawsuit against N.M. - Jan 2013

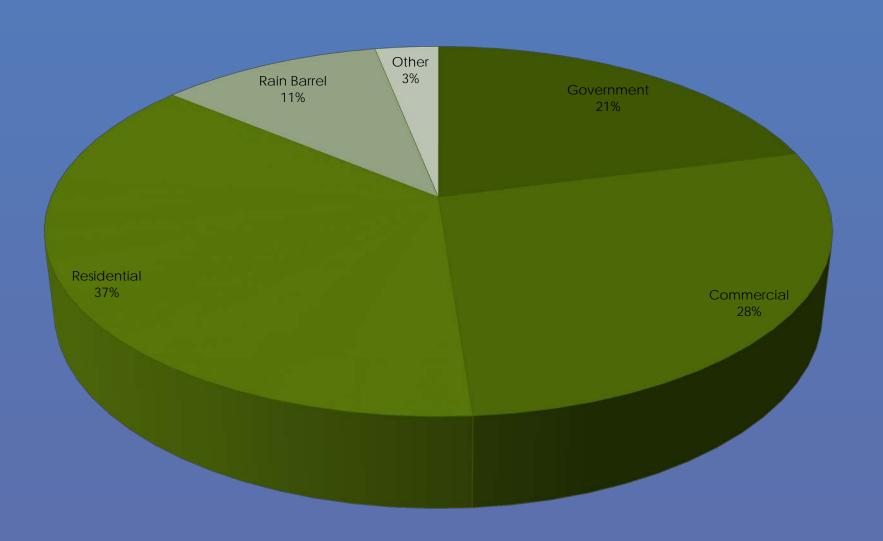
Chemical

U.S. rainwater market to exceed \$1 billion



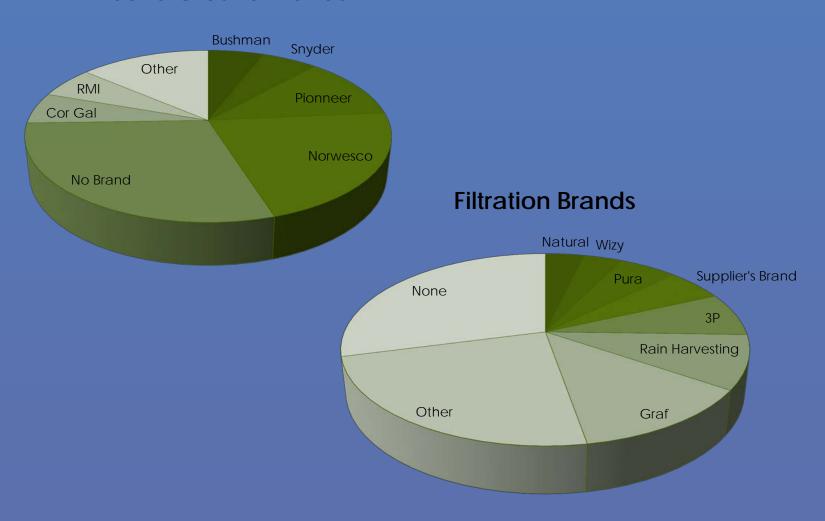
Source: U.S. Rainwater Industry Analysis

Split Between Residential and Commercial



Products Favored by Installers

Above Ground Brands



Distribution of Market

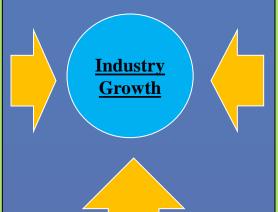
State	Number of Businesses	% of Total
Texas	208	18.86%
California	158	14.32%
New Mexico	79	7.16%
Georgia	75	6.80%
Arizona	61	5.53%
Washington	60	5.44%
North Carolina	43	3.90%
Hawaii	38	3.45%
Florida	35	3.17%
Oregon	30	2.72%
Illinois	29	2.63%
Ohio	20	1.81%
Virginia	20	1.81%

Regulations, drought and lack of or too much water (most of the time) drive interest

Drivers of industry growth

Supply side growth

- Improving reliability of solutions
- New technologies and product offerings
- Existing industry value chain
- Plumbing code updates



Demand side growth

- <u>Increasing water costs</u>
- Water scarcity
- Desire to conserve
- Growing awareness of rainwater solutions
- Incentives
- Sustainability movement

Growth Inhibitors

- Economy
- Rainwater is not part of discussion!
- Scant Federal or State support
- No industry standards

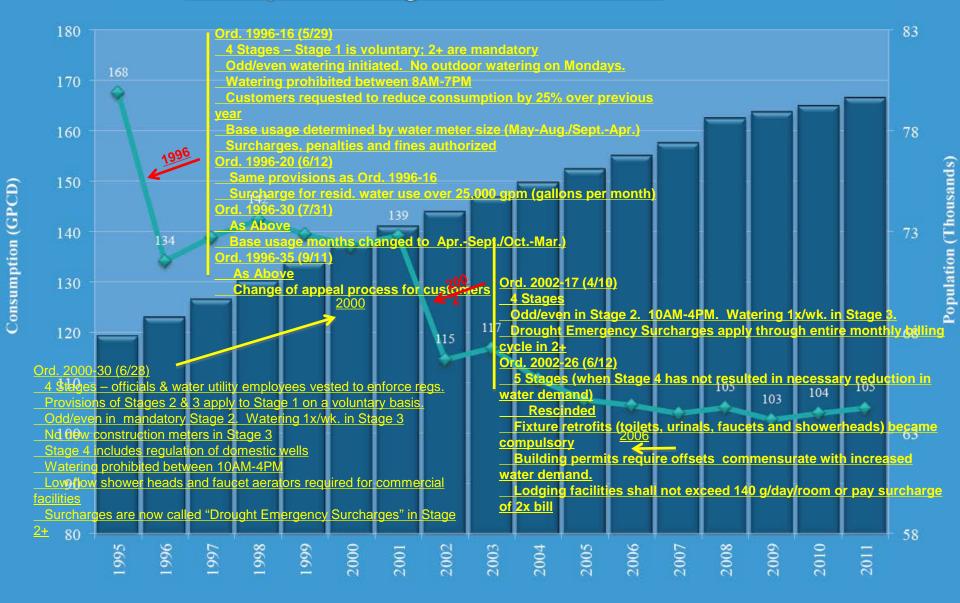
- State-by-State "opinions"
- RWH regs often more stringent than well water
- A lot of foreign products

Examples – How many Guides Do we Really, Really Need

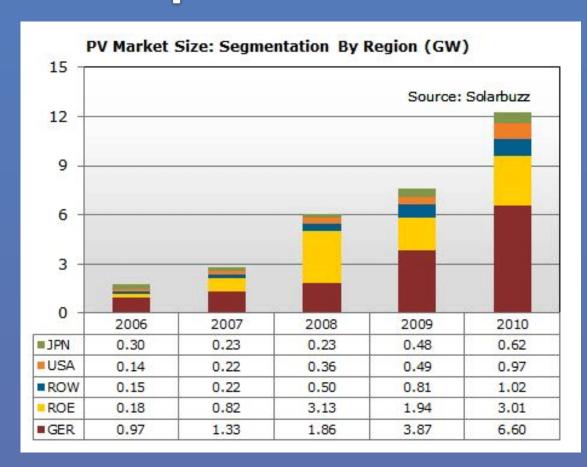
- ASPE Guidelines
- EPA Municipal Handbook Rainwater Harvesting Policies
- Texas Rainwater Harvesting Guide
- Guidelines on Rainwater Catchment Systems for Hawaii
- Rainwater Harvesting in San Francisco
- Georgia Rainwater Harvesting Guidelines
- Virginia Design Specification No. 6: Rainwater Harvesting
- Virginia Rainwater Harvesting Manual, 2nd Edition

- Arizona Rainwater Harvesting Guidance Manual
- Los Angeles City Low Impact Development Ordinance
- U of FL Cisterns To Collect Non-Potable Water For Domestic Use Guidelines
- New Mexico Rainwater Harvesting Manual
- Oregon Smart Guide Rainwater Harvesting
- >> The list goes on and on....

Examples – Regulations Do Work



Examples – Incentives Do Work



- Solar industry benefiting from great incentives
- Higher incentive in some areas than others
- Even within States it is all over the board – NM

Works for solar, why not water?

What To Do????

- Zero runoff from Fed Bldg Lead by Example
- Fund equivalent of Database of State Incentives
 for Renewables and Efficiency (Dept of Energy)
- Sample guides that could be copied by States and counties (i.e. irrigation, toilet flushing, drinking systems)
- Rationalize water quality standards (e.g. why can untested well water be used in a toilet and not rainwater. We have naturally occurring arsenic and uranium in NM wells)
- Grants to research/build US products. Most imported from Germany, UK and Australia

Summary

- Rainwater needs to be part of the solution, not a problem (i.e. Stormwater)
- Rainwater market is growing but very, very fragmented
- Regulations and incentives vary greatly from state-to-state and even within states
- Many, many things can be done
- Start the discussions now! Action to Follow