Recycled Water Outreach and Acceptance

Governor’s Blue Ribbon Panel on Water Sustainability

Graham Symmonds
Global Water

May 2010
Messaging

• Amending behavior
• Building trust
• The most effective interventions:
  – combine several policy tools (e.g., information, persuasive appeals, and incentives) to address multiple barriers to behavior change;
  – use strong social marketing, often featuring a combination of mass media appeals and participatory, community-based approaches;
  – address multiple targets (e.g., individuals, communities, and businesses)

“Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions”, PNAS November 3, 2009 vol. 106 no. 44
Key Elements in Acceptance of Recycled Water

• Trust
• Transparency
• Best Management Practices and Risk Management
• Education
Trust

• Trust = willingness to accept risk
• Corporate messaging is often viewed as “untrustworthy”

• Communication needs to be “repetitively credible”

• “The goal can’t be to create a kind of psychological house of mirrors so that people end up seeing exactly what you want. The goal has to be to create an environment that allows them to be open-minded.” You can’t do that just by publishing more scientific data.

• Acceptance “depends to a large extent on the assumptions made about which benefits, costs, and risks to the community are considered in the framing of the economic analysis and how they are valued.”

Sources: Everbridge, “What’s Fueling Public Distrust?”, webinar 20 May 2010
Christopher Joyce “Belief In Climate Change Hinges On Worldview”, NPR, 23 February 2010
Nyree Stenekes, Hal K. Colebatch, T. David Waite and Nick J. Ashbolt
Trust

- The most common reasons given for non-acceptance of potable recycling as lack of faith in institutions, politicians, and those in charge.

Source: Nyree Stenekes, Hal K. Colebatch, T. David Waite and Nick J. Ashbolt
Building Trust

• Ensure compliance is a leading indicator, not lagging
  – High Reliability Organization
    • F O R C E D
  – Move from discrete compliance to a program of continuous compliance through a combination of Condition-based assessments and Performance Permitting

• Transparency in Operations
  – Demand reporting mechanisms and practices to ensure transparency
  – Direct ties to regulatory agency and academic evaluations of systems

• Public participation
• Best management practices
• Ensure risk is managed appropriately
Transparency

• Supports trust
• Encourages participation
• Promotes “buy-in”
Best Management Practices and Risk Management

- QMRA
- SHHRA
- HAACP Reviews
- Multiple Barriers
Multiple Barriers

Source Control
Industrial Pre-Treatment Programs

Screening

Biological Treatment

Filtration

Disinfection

Nitrification/Denitrification

Operations Expertise

Testing/Inspections

Education/Outreach

USE

Cumulative Probability of Failure

Number of Barriers

Multiple Barrier Concept

Global Water
Having Asthma: 1,111,111 cases per 10,000,000 people
Being Unemployed: 769,231 cases per 10,000,000 people
Having Diabetes: 226,684 cases per 10,000,000 people
Premises Burglarized: 169,492 cases per 10,000,000 people
Having your Car Stolen: 68,493 cases per 10,000,000 people
Having a Stroke: 60,947 cases per 10,000,000 people
Contracting Hepatitis: 52,072 cases per 10,000,000 people
Being Robbed: 11,889 cases per 10,000,000 people
Contracting Ross River Virus: 11,678 cases per 10,000,000 people
Killed in a Car Accident: 9,266 cases per 10,000,000 people
Dying of Skin Cancer: 6,716 cases per 10,000,000 people
Accidental Drowning: 1,800 cases per 10,000,000 people
Being Murdered: 1,628 cases per 10,000,000 people
Killed in a Plane Accident: 710 cases per 10,000,000 people
Struck by Lightning: 100 cases per 10,000,000 people
Contracting Leprosy: 3 cases per 10,000,000 people
Winning Division 1 of X-lotto: 1 case per 10,000,000 people
Virus from Reclaimed Water: 0.6 cases per 10,000,000 people

Source: Australian Academy for Technological Sciences and Engineering
Outreach

Recycling water can seem expensive, until you run out.

What's a reliable water source?

Nothing's more essential to life than water. Yet more costly than running. Growth-driven demand, overuse, and an aged water system make it necessary. It adds 20% to your water consumption by 40%.
To learn more about water recycling, go to gwsources.com

Water that shapes communities.

Desert living requires a deep respect for water. That respect forms the every community Global Water serves. We partner with developers to building neighborhoods with renewable water systems. By utilizing residential wastewater, we're able to provide more water for publics and more from the environment. And where water conservation works the well, both communities and desert communities in great shape.

We turn your water use into a water source.

Here in Arizona, providing water begins with conserving it. That's why, as the state's fastest growing private water supplier, we're committed to water reclamation and reuse. By recycling and reclaiming the water that goes down your drain, we reduce your water usage for cleaning, irrigation, and golf courses. And that makes every drop go a lot further. Because even in the Desert Southwest, there's more than enough water for all of us, as long as we all become smarter about conserving it.

Global Water

Global Water, one of our biggest is reuse. We're able to provide reuse. Option demand on gwsources.com

The writing's on the wall.

Global Water Reusable Renewable Reusable
Global Water Center
Education

Daily Projected Water Savings
Through Recycling in this Building

83% Water Savings
That's 23,700 gallons saved monthly
That's 288,350 gallons saved annually
That's 14,417,500 gallons saved in the building's life

- Con conventionally Plumed Building
- Recycled Water Plumed Building

Daily Potable Water Use
Daily Recycled Water Use

"We used to think that energy and water would be the
critical issues for the next
century. Now we think water
will be the critical issue."
- Mansfield Talbot
Former Head of the
United Nations
Environment Program

"Historically speaking, land is
war and water is peace.
With water you can make
policies because you can
transfer it, which you cannot
do with land."
- Shimon Peres
Former Prime Minister
State of Israel
Education
Education

- The Water Crisis
- Resource Guy and Resource Gal
  - LEED
  - Recycled Water

http://www.gwresources.com/community-outreach.php
Demonstration

Rethinking Water Recycling in your Garden

The plants grown in this display are grown with recycled water - they are safe to eat and they didn't use one drop of drinkable water. Throughout the nation, farmers, homeowners and homeowners are using recycled water, making American agriculture more sustainable. Global Water has dedicated 2 acres on the site to the U.S. Department of Agriculture and the University of Arizona to continue research on the benefits of using recycled water for agriculture.
Summary

• Trust and Clarity
• Participatory communications are key
• Providing a non-technical point of view is imperative
• Transparency
• Fairness in process