The Impact of Words and Context on Acceptance and Experience of Water

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Water, energy and fertilizer translate into life-sustaining benefits

- Wastewater goes into a resource recovery plant (formerly known as a wastewater treatment plant)
- Water, energy and fertilizer come out
- The plant manufactures things we need to survive
Wastewater is a source of water, energy and food (fertilizer).
Wastewater is a Recoverable, Reusable Resource.
Reused or Reuseable?
Sludge or Biosolids?
Wastewater Plants or Resource Recovery Facilities?
Effluent for disposal or a source of water for various purposes?
Stigmatized perceptions and negative associations limit our capacity to tap into these valuable resources.
Our current perception of water reuse is stigmatized

- When we start with stigmatizing words and images it is hard to ‘get over it’

- Treated Wastewater

- Toilet to Tap

- Crappy Solution
Does the language we use to relate water to its history as wastewater flush reuse projects down the toilet?

Hey, Sugar, how about a couple of glasses of “treated wastewater?”

*Might there be a different way we can do things?*
Let's look to the research

WRF 07–03
Co–Principal Investigators
Linda Macpherson and Dr. Paul Slovic

WRF 09–01
Co–Principal Investigators
Linda Macpherson and Dr. Shane Snyder
A note about methodology

- Both studies followed similar investigation processes
  - Literature review
  - Focus group research
  - Internet-based survey
- Focus groups and surveys conducted in both United States and Australia (various locations)
- Survey participants selected by professional panel selection companies to provide representative samples
The WRF 07–03 research question

- Reused Wastewater
- Indirect Potable Reuse
- Unplanned Indirect Potable Reuse
- Inadvertent Indirect Potable Reuse
- Recycled Wastewater
- Influenced Waters

Could it be that the vocabulary used to explain technology and the concept of reuse actually inhibits public understanding and results in lack of acceptance?
Percent respondents who indicated they have some understanding of the term, or understood it well enough to explain it.

The most understood words are a part of everyday conversation and the least understood words are technological treatment terms.
What should we call the water that is used to augment drinking water supplies?

The least reassuring terms are the ones we use the most.

Percent respondents who feel the term is reassuring or very reassuring.
Key findings from the WRF 07–03 focus group meetings

- Most people just want to be assured that the water they are drinking is safe – but –
- If information is not available and easy to understand it gives rise to misgivings and mistrust
- Information should be simple enough to understand but technical enough to trust
The WRF 09–01 research question:

Does understanding the water cycle make a difference and could it generate more acceptance of drinking water reuse?
Focus Group Results – Safest Drinking Water

- Of four hypothetical reuse scenarios, the Direct Use scenario was considered to produce the safest drinking water.
- People were not worried about where the drinking water came from, as long as it met standards.

Direct Drinking Water Use
Quotes from the Focus Groups indicate the influence of terminology

- Mr. M said (paraphrased):

“My decision [for safest water] was solely based on the terminology, you saying that water from a purification plant produces water that meets or exceeds drinking water standards. So based on that I said that scenario because you have potentially water going into the city that exceeds drinking water standards. And probably the least safe was the one with no purification plant. If the purification plant did not exceed the standards then it'd probably be completely all different answers.”
WRF 09–01 survey research reinforces the focus group finding that people were comfortable with direct drinking water use

- Survey respondents were asked the same questions as asked of the Focus Groups, but were also asked which water they prefer to drink.
- Direct drinking water use was the first or second most preferred water by about 45% of the total survey population.
- Hypothetical reuse scenarios including a water purification plant was preferred (first or second choice) over the current practice scenario by a margin of about 2 to 1.
Conclusions, Implications, and Recommendations

What Does all this Mean?