

Improving public perception of water reuse

POLICY BRIEF
JANUARY 2019

Introduction

Water reuse is becoming more important to water security in arid regions like California. The California Recycled Water Policy calls for an increase of 1 million acre-feet of reused water per year by 2020 and 2 million by 2030. Assembly Bill (AB) 574 mandates that California establish a legislative framework for [direct potable reuse \(DPR\)](#)—where highly treated wastewater is recycled for drinking and other potable purposes—by 2023.

Technology already exists to treat reused water to levels meeting or exceeding health standards. But adequate technical capacity is not sufficient. Water reuse can trigger revulsion, especially when water is reused for drinking or other potable purposes. This note explores outreach and engagement strategies to overcome the “yuck factor” and achieve public support for water reuse.

Case studies

Los Angeles East Valley Water Recycling Project

In 1995, the Los Angeles Department of Water and Power (LADWP) began developing the East Valley Water Recycling Project. This \$55 million water-reclamation project was intended to help “drought-proof” Los Angeles by using treated wastewater for groundwater recharge, irrigation, and other purposes. The project secured necessary approvals and construction was completed in 2000.

But as East Valley was about to come on-line, it was derailed by a public-relations disaster. Problems began when the *Los Angeles Daily News* published an article about East Valley with the headline “Tapping Toilet Water.” The concept of sewage being used for drinking sparked public outcry.

At the same time, an open Los Angeles mayoral contest was beginning. Several candidates seized on opposition to East Valley as campaign fodder, pledging to put a stop to “toilet-to-tap.” City attorney James Hahn was ultimately elected and made good on this promise. Hahn shut down East Valley

and required LADWP to sever the pipeline bringing recycled water to the Hansen Spreading Grounds.

That public outcry could undermine a finished, \$55 million project illustrates the importance of robust public engagement. As Gerald Silver, President of the Homeowners of Encino, said of LADWP’s poor outreach around East Valley: “Reaching out means reaching out in a way that people will understand.”



The severed pipeline at the Hansen Spreading Grounds is a reminder of public power and the importance of outreach.

Water reuse in Orange County

The Orange County Water District (OCWD) provides a successful example of water reuse. In 2008, OCWD began operating the Groundwater Replenishment System (GWRS), treating treated more than 70 million gallons per day of wastewater to potable standards. The product was then sent to replenish local aquifers used for drinking water.

The project has been widely recognized for its emphasis on education and engagement as well as engineering. A full decade before beginning construction, OCWD launched a public relations campaign to overcome negative perceptions of water reuse and secure broad support. The campaign employed various outreach strategies, including facility tours, television ads, briefings for elected officials, and partnerships with community groups and community leaders. It worked; the GWRS faced no substantial opposition. Media coverage of the project was generally positive, including headlines like [“How California is Learning to Love Drinking Recycled Water”](#) and [“Magic in a Bottle”](#).

OCWD continues to creatively prioritize public relations as the GWRS expands. In 2017, OCWD secured special permission to bottle its recycled water for consumption. The bottles were distributed at tasting events throughout Southern California. In 2018, OCWD gained substantial media attention by earning a Guinness World Record for the most recycled water produced in 24 hours.

Research insights

Research confirms that outreach and engagement can increase acceptance of water reuse. Providing consumers with information on water reuse is a good first step. A [survey](#) commissioned by the water-technology company Xylem Inc. found that 89% of California residents are more accepting of reused water after learning more about the treatment process. A similar [survey](#) from the Victor Valley region of Southern California found that educating respondents about water reuse increased support for water reuse projects by 8 percent and decreased opposition by 7 percent.

Research also suggests ways to tailor messaging around water reuse. Public reaction to water reuse is often influenced by “affect heuristic,” a psychological principle that refers to people’s tendency to instinctively react to a stimulus based on prior experiences with similar or related things. Affect heuristic makes it difficult for people to overcome disgust associated with wastewater and accept scientific evidence that water reuse is safe. Numerous strategies exist to combat this heuristic. The Xylem survey found that referring to reused water as “purified” water garners stronger support for its use as an additional local water supply than referring to it as “recycled” or “reclaimed” water. Other [studies have found](#) that emphasizing the low risks of water reuse increases support more than emphasizing the benefits. Finally, messaging should avoid terms with negative connotations (such as “sewage” or “waste”) and incorporate terms with positive connotations (such as “clean” and “sustainable”).

In addition, it is helpful to provide opportunities for people to experience water reuse firsthand. [Pure Water San Diego](#) and the [Silicon Valley Advanced Water Purification Center](#) are just two of the multiple water recycling projects that, like OCWD, offer regular public tours. Tours allow participants to sample finished water: a powerful strategy for increasing consumer acceptance. As Marta Lugo, a

public information representative of the Santa Clara Valley Water District (SCVWD, which oversees the Silicon Valley project), [noted](#): “If people see their neighbors taking a taste, or their friends and peers, they get over a psychological barrier—it becomes normalized.” Indeed, the SCVWD found that taking a tour more than doubled the percentage of people strongly in favor of potable wastewater reuse.

Key takeaways

Takeaway 1: Engage proactively

The LADWP case study shows that it is difficult to recover once a negative narrative has taken hold. Hence outreach should begin early, during project planning. Options include working with community organizations, the media, and local leaders to explain how and why key decisions were made; sending brochures to utility customers; and hosting informational booths at public events.

Takeaway 2: Message carefully

How information is delivered is as important as the content itself. Messages should be delivered in clear, non-technical language, and should emphasize positive aspects and low risks of recycled water. It is also useful to articulate how water recycling can mitigate local water-supply issues.

Takeaway 3: Encourage public involvement

Broad public involvement in creates a sense of ownership that increases support. Project managers should consider recruiting local and stakeholders for advisory councils, providing opportunities for public comment, and offering tours and open houses.

This policy brief was authored by Kahui Lim (klim@ucdavis.edu) and Hannah Safford (hhsafford@ucdavis.edu) for the course “ECI 289: Synergies Between Environmental Engineering and Water Policy.” Visit policyinstitute.ucdavis.edu for additional policy briefs and other resources.

LEARN MORE

- City of San Diego. (n.d.) [Pure Water San Diego](#).
- Homan, N. (2016). “[Toilet to tap](#)”: A potential high quality water source for California. California WaterBlog.
- Leong, C. (2016). [The Role of Emotions in Drinking Recycled Water](#). *Water*, 8(11).
- Orange County Water District. (n.d.) [Water Reuse](#).
- Price, J., et al. (2015) [Developing effective messages about potable recycled water: The importance of message structure and content](#). *Water Resources Research*, 51(4).
- WaterReuse Foundation. (2006) [Marketing Nonpotable Recycled Water](#).