

Utility Communications



THE CHALLENGE

Water utilities face a unique set of operational challenges each day, and communication is no exception. Messages are often complicated and audiences can be untrusting or simply overwhelmed by technical jargon. Rising customer expectations and a changing media environment add to the complexity. Today's customers require more than those of the past—more services, more information, and more involvement in the decision-making process. However, many of these customers are receiving information about their water from multiple media sources beyond the utility, which can create a confusing mix of information and trigger preconceived ideas spurred by emotion. All of this makes a utility's ability to effectively communicate that much harder.

Utilities can no longer be the silent service they once were, working quietly behind the scenes to provide clean water. Water service providers must be collaborative, transparent partners—constantly working to build positive relationships and convey transparent, straightforward messages.

THE RESEARCH

As early as the 1980s, WRF began exploring issues related to utility communications. The 1986 report *Public Attitudes Toward Water Utilities* took a comprehensive look at perceptions of drinking water quality, safety, and cost, and uncovered a major shortfall in the way utilities were communicating with their customers. The research hit upon the need to drastically improve the water sector's public information programs and opened the door to a

growing body of WRF research that continues to move the industry's approach to communication today.

Since the report's release, WRF has conducted more than 75 research projects in this area, developing key partnerships with collaborators like the U.S. Environmental Protection Agency, the Water Environment Federation, the American Water Works Association, the WaterReuse Association, UK Water Industry Research (UKWIR), and the Commonwealth Scientific and Industrial Research Organisation. Research covers communication on everyday water issues as well as more sensitive topics, engagement and education, and stakeholder involvement.

Risk Communications

While communicating any information to the public can be a challenge, delivering information on potential risks is inherently more difficult due to the emotional factors that are in play. To encourage transparent and effective dialogue in this area, WRF has pioneered guidance on communicating about risk. From high-profile areas like biosolids and constituents of emerging concern (CECs) to longstanding issues with cyanotoxins, research covers critical topics, offering tools and resources to effectively inform the public.

Beginning in the 1990s, WRF recognized the importance of informing stakeholders on sensitive issues, releasing some of the first scientifically based guidance on biosolids—and changing the way the water sector communicates about issues that cause public concern. Research like the *Biosolids Communications Bundle*, released in 2014, focuses on thoughtful, science-based communication approaches. The collection of reports consists of five research projects ([SRSK2R08](#), [SRSK2R08a](#), [SRSK3R08](#), [SRSK4T08](#), [SRSK5T09](#),



Total Daily Water Intake Necessary to Yield Equivalent Dose of One Ibuprofen Pill

Source: WRF Project 4387

[and 06HHE5PP/1332](#)) that explore issues of public interest, covering everything from epidemiological surveillance to outreach on potential risks and odors, and opening up a clear and transparent conversation.

Although there is a large amount of published data on CECs and related risks, *Development of a Water Utility Primer on EDCs/PPCPs for Public Outreach* ([4387](#)) took one of the first comprehensive approaches to interpreting this information, breaking it down in an easy-to-follow manual. The 2015 primer is based on data from more than 400 endocrine disrupting compounds and ingredients in pharmaceuticals and personal care products. It explores occurrence, health effects, regulatory programs, treatment, and monitoring and communication approaches, to help drinking water utilities understand the issues and develop strategies to not only address them, but to communicate their approach and results. It also includes tips on how to make technical information relevant to customers (see graphic) as well as links to more than 20 communications pieces developed by water utilities.

Released the same year, *Core Messages for Chromium, Medicines and Personal Care Products, NDMA, and VOCs* ([4457](#)), also focuses on communicating the risks of CECs. This research generated a series of products to help the water community connect with different audiences, taking into account consumer perceptions. An animated film, *Protecting Our Drinking Water*, provides a simple overview of the most prevalent CECs, covering issues such as occurrence, treatment, and regulations and how they are all linked to clean, safe water. The project also produced question-and-answer articles and technical information sheets.

The issue of persistent cyanotoxins and associated risk also remains a top WRF research area—and communication continues to be a priority. To address this need, in 2018 WRF released *Four Steps to Effective Cyanotoxin Communications: A Risk Communications Toolkit* ([4697](#)). Materials,

templates, and tools help utilities, regulatory agencies, and water professionals communicate about risks associated with cyanotoxins in drinking water. The report also highlights communication barriers, for example the complexity of health guidance and time required for results. The report also includes linguistic research, which was used to develop recommended health advisory and alert language.

Inform and Educate

While communicating with the public is key to utility success, delivering a deeper level of understanding of what it takes to provide clean water can create a more mutually beneficial relationship. When customers and the public have an awareness of where their water supply comes from, the steps it takes to get there, and the fact that all water is innately connected, their perception of the value of water shifts. Their opinion of their utility also tends to be more favorable—particularly if the utility is proactively providing information. WRF has been at the forefront of this issue, providing research to educate the public and strengthen project support.

In 2008, WRF took one of the first steps in cultivating this understanding with *Communicating the Value of Water: An Introductory Guide for Water Utilities* ([3113](#)). The guide lays out fundamental messages, still relevant today, that utilities can use to speak to the value of their product and identifies marketing tools that can be used to successfully illustrate the true worth of tap water. It also spotlights water utilities that have successfully communicated the value of their water, the tools used, and associated cost, so these strategies can be put to use in other utilities.

Building on this concept, the 2016 project *Rate Approval Process Communication Strategy and Toolkit* ([4455](#)) explores how to communicate the cost of factors like tightening regulations and aging infrastructure. These factors often increase the value of water by way of the additional funding they require—which equates to increased rates. This research offers a framework utilities can use to gain support during rate and budget approval processes.

More recent circumstances, such as climate change, are also driving the need to effectively communicate and build public support for additional investments. Because this topic can get bogged down in politics, probabilities, and unknowns, WRF has developed fact-based guidance on communicating risks, as well as how to have conversations with audiences that have varied ideas about climate change. The 2014 guidebook, *Effective Climate Change Communication for Water Utilities* ([4381](#)), walks utilities through crafting evidence-based messages that resonate



with an audience, with an emphasis on building support for climate-related adaptation and mitigation investments.

Another 2014 project offers resources to communicate about water supply diversification, with a specific focus on desalination projects. *Development of a Public Communication Toolbox for Desalination Projects* ([4481](#)) draws on the experience of successful desalination projects around the world, offering materials that act as a starting point for developing a public outreach plan. Materials include customizable project fact sheets, a how-to guide, and the video *Desalination: Water for a Thirsty World*.

More recently, WRF research has focused on educating customers on how to protect themselves against waterborne disease. *Customer Messaging on Opportunistic Pathogens in Plumbing Systems* (OPPPs) ([4664](#)), released in 2019, includes steps for those who maintain building water systems to safeguard themselves and their tenants in the event of a waterborne disease outbreak. The research focuses on *Legionella*, the bacteria responsible for the majority of OPPP outbreaks. Because the control of OPPPs requires a multifaceted approach, the research pinpoints key messaging and methods to reach a variety of audiences based on risk and occurrence.

Stakeholder Collaboration

Many times, the ideas, plans, and concepts utilities want to get across are not theirs alone—other organizations and industries need to deliver similar information—and working together with a unified voice can strengthen the message. However, establishing necessary partnerships isn't always easy. WRF recognizes this challenge and has curated tools and resources to help identify potential partners and initiate and reinforce relationships with stakeholders with shared interests, including local municipalities, non-profit organizations, and other regional utilities.

Research from the 2014 project *National Dialogue on Contaminants of Emerging Concern and Public Health* ([4463](#)) lays the groundwork for a broader, more open discussion on potential risk from CECs in drinking water. Representatives from water quality organizations, public health groups, regulators, and other organizations identified common goals and crafted statements that establish a shared understanding of CECs and public health. Six overview papers capture various perspectives, such as medical, public health, and regulatory, helping utilities improve cross-disciplinary communication strategies.

Blueprint for One Water ([4660](#)), released in 2017, also underscores the need for involvement from multiple

SOLUTIONS IN THE FIELD: Philadelphia Water Department



Taking the concept of effective communication even further, in 2017 WRF partnered with UKWIR to produce *Terminology for Improved Communication Regarding CECs* ([4551](#)). The guide focuses on creating a common language and understanding of terms related to CECs. Considering factors such as negative connotations and degree of risk, the guidance document is a go-to source for how to refer to contaminants and how to talk about risk and safety. A terminology list defines more than 125 contaminants in layman's terms, describing each contaminant, how it gets into water, and potential health effects, so everyone is on the same page.

Philadelphia Water Department (PWD) shared these guidelines internally through its Water Quality Committee. Public Affairs managers have used them to craft their communications with the news media and the general public. PWD now has a better appreciation for avoiding problematic terminology perceived by the public to be “scary.” “Communicating according to guidelines such as these has encouraged public confidence,” said Gary Burlingame, Director of the Bureau of Laboratory Services at PWD. “We get good feedback from customers, and the news media comes to us often to get information rather than to attack us—so that's a good place to be.”



stakeholders. The user-friendly handbook contains practical guidance for the adoption of a One Water approach, calling out engagement as a core concept. The guide outlines action items necessary to involve elected officials, regulating bodies, special interest groups, and the community—with the goal of engaging diverse groups in the process to provide valuable input and guidance—and ultimately help spread the message.

Communication between water managers, who promote solutions, and urban planners, who implement them, is also extremely valuable. Released in 2018, *Joining Up Water Management with Urban Planning and Design* ([SIWM5R13/4853](#)), takes a closer look at how these two professions can work together on innovative solutions, such as water reuse, nutrient recovery, rainwater harvesting, and a host of water conservation and stormwater management projects. Top strategies include scenario planning, visioning, and goal setting, which can shed light on common objectives.

The 2018 project, *Integrating Land Use and Water Resources: Planning to Support Water Supply Diversification* ([4623](#)), further explores coordination between water and land use planners, focusing on expanding water supplies. The research resulted in an easy-to-use handbook, *Coordinated Planning Guide*, which identifies opportunities in the water and land use planning process for better integration. The guide makes recommendations for advancing development of alternative water supplies, as well as how to keep all parties engaged and informed during long-range planning, code and regulation activities, and review processes.

Reuse Communications

While interest in water reuse has grown in the last decade, public acceptance can still remain a roadblock. Understanding and addressing community concerns are critical to every reuse project. WRF has helped make strides in this area, identifying long-held perceptions and developing materials to educate the public, including the collaborative launch of [Water Reuse 101](#), a collection of online materials utilities can use to inform customers (see sidebar).

A collaboration between WRF, several California utilities, and the Bureau of Reclamation, *Pharmaceuticals and Personal Care Products Communications Toolkit* ([Reuse-09-07/1665](#)), also tackles public acceptance, stressing the need to make findings about risks from non-potable recycled water easy to understand and meaningful. Resources like an illustrated brochure on the risk of recycled water and a series of flyers put information into perspective. A



WATER REUSE 101

An online hub of materials that helps change the way the public thinks about water reuse, including:

- **Printable materials that break down technical information into relatable facts**
- **Library of short videos that covers fundamental reuse concepts**
- **Interactive map that highlights science and safety practices at reuse sites around the world**

DVD also explains the results of a risk assessment study in non-technical terms, so concepts are easy to grasp.

Follow-up research takes this concept a step further, developing actionable plans to increase acceptance. *Model Public Communication Plans for Advancing Direct Potable Reuse Acceptance* ([4540](#)) published in 2015, outlines methods to engage audiences that can make or break potable reuse options. The report contains state-level communication plan models and community-level outreach plans, including messaging components with outreach tools and tactics.



WHAT'S NEXT?

As the water sector continues to make advances and science evolves, communicating new findings and necessary investments will remain a core goal. As we realize the interconnectivity of water, expanding communication beyond traditional partners and stakeholders will become increasingly necessary. And emerging challenges will call for ways to communicate the need for, as well as the cost of, new solutions. Communication will need to become even more embedded in the water treatment and delivery process.

One ongoing project is already helping to make this happen. As changing weather patterns and shifting populations increase the need to supplement water supplies with reuse, consistent communication and education will need to be integrated into the process. *Potable Reuse Demonstration Design and Communication Toolbox* ([4979](#)), is looking at effective strategies for incorporating public education and engagement elements at potable reuse demonstration facilities. A central deliverable will be material that presents science and research on potable reuse in general terms so everyone can be fully engaged.