Trending in an Instant

A Risk Communication Guide for Water Utilities

American Water Works Association

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A Risk Communication Guide for Water Utilities

December 1, 2019

Dear Water Utility Colleagues:

As part of our long-standing effort to proactively inform and prepare utility leaders, AWWA has created *Trending in an Instant: A Risk Communication Guide for Water Utilities* to enhance your ability to communicate effectively when your utility finds itself unexpectedly in the spotlight. In an environment of reduced public trust in government agencies and a constantly changing and evolving media landscape, it is more important than ever that you are prepared to respond to the increasingly visible and sensational communication challenges around water. This guide is designed to provide research into the psychology and behavior behind customer response to media-driven community fears and, more importantly, deliver targeted tools and action steps to help you respond effectively before, during and after a high-profile communication issue in your service area.

In this guide you will find recommendations and best practices to assist you in:

- Understanding today's communication environment and the opportunities created by social media and risk communication;
- Building your standing in the community as a trusted information source;
- Responding effectively to community concerns that may stem from misinformation broadcasted;
- Learning from other utilities that have experienced a negative media cycle and maintained and grown their reputation; and
- Accessing the best of recent utility-focused communication research.

Plus, the Appendix provides a series of Quick Response Sheets with talking points for a variety of issues our members are facing, case studies from utilities across the country and a robust list of additional resources.

We drew on the experience and expertise of your fellow water utilities in creating this guide to ensure the advice we provided is specific to the challenges faced by water utilities. Utility staff across the country graciously shared their field-tested tools, recommendations and lessons learned to help you plan for communication crises in your area. As Clay Duffie, General Manager of Mount Pleasant Waterworks, points out, "You can't prevent an emergency. Your response and resulting communication are the only things you can control."

On that note, I want to point out that this guide is intended to complement existing communication efforts at your utility, including crisis communications. A crisis communications plan is a critical tool in helping utilities manage emergency situations, and we highly recommend incorporating this guide into your emergency management plans as a separate but equally critical planning tool. This guide is designed to help you manage and, hopefully, capitalize on unexpected communication challenges to build trust and develop relationships with your customers that can be leveraged for other communication efforts, including during a crisis situation.

We encourage you to leverage the combined experience of the utility industry by reaching out to us and to your peers as you prepare risk communication strategies in your own organizations.

We intend for this guide to be a living document that we will update as the media and communication landscape continues to evolve. This will ensure that utility communicators and staff always have the most current information and tools at their fingertips. AWWA members provide an essential and life-sustaining resource to customers across the world, and we are committed to supporting you in your important work. It is our hope that you will find this guide a valuable tool in your utility management toolbox now and in the future.

Sincerely,

Mary Gugliuzza
Chair, AWWA Public Affairs Council

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Executive Summary

As a water service provider, your core focus is to protect public health and the environment. Water professionals have traditionally met their public health mission as a silent service. In the past, your utility's standards, practices and processes may have received little attention from the community you serve. Today, however, sensationalism around drinking water quality incidents, widespread broadcasting through social media and the growth in public distrust of government agencies means your community needs to hear from you. The new media environment means you may need to respond quickly to media-driven community fears about the services you provide. Risk communication strategies and best practices can help.

As part of its long-standing efforts to proactively inform and prepare utility leaders, AWWA has created *Trending in an Instant: A Risk Communication Guide for Water Utilities* to enhance your ability to communicate effectively when your utility is in the spotlight. This guide helps you:

- Understand today's communication environment and the opportunities created by social media and risk communication;
- Build your standing in the community as a trusted information source;
- Respond effectively to community concerns that may stem from broadcast misinformation;
- Learn from other utilities that have experienced a negative media cycle and maintained and grown their reputation; and
- Access the best of recent utility-focused communication research.

Preparation is the best approach, but if you are experiencing a spotlight event *right now,* go to Page 19 for a checklist of response actions and targeted risk communication tools.

Risk Communications

Special "risk communication" techniques are beneficial for communicating in an environment where fear, anxiety and high emotions are present.

Risk communication best practices help you return the conversation to one of reasoned discourse and enhance your reputation as the trusted source for information.

The proven techniques in this guide are based on neurological and psychological science.

Today's Context: Communicating in an Era of Distrust

While most utilities provide water and wastewater services that meet all standards, and even a short disruption of service is a rare event, utilities are seeing heightened anxieties about water quality and environmental concerns bubbling up from those they serve. Media coverage of the Flint, Mich. water crisis and the daily reports questioning water quality have had an impact. According to a 2016 Kaiser Family Foundation poll, Americans ranked contaminated drinking water third—just behind heroin abuse and cancer—as the biggest risk to public health. Most Americans report their trust in local government is much higher than their trust in state and federal governments; however, civility itself has become a concern, even for local jurisdictions.

Consumers are paying attention and increasingly seeking out information about the safety and quality of their water. Ideally, they receive information from you, and you are their trusted source for water information. However, if you are not communicating, they may turn to Google for information or a Facebook friend may provide a link to a company promoting a product. If this happens, these sources can become your customers' trusted source for water information. Social media sources may provide information that is incorrect, incomplete or without context. Investing in communication programs designed to build trust with consumers is an excellent way to insert yourself into a landscape crowded with self-proclaimed experts.

The Silent Service Provider

Being out of sight and out of mind has been a longstanding mode of operations for utilities. Water utility infrastructure is often in remote locations or buried underground, making it easy for consumers to overlook the integral role it plays in their daily lives. The magnitude and complexity of effort required to collect, treat and distribute safe and high-quality drinking water, and then clean wastewater to protect the environment, is

often lost on a public that depends on these essential services. Most customers have a transactional relationship with their utility focused on paying their bill and an occasional call to customer service.

Many utilities have favored a reactive approach to communication focused on maintaining good, reliable water and wastewater service and answering customer questions as they arise. In fact, The Water Research Foundation (WRF) has found that nearly half of all water utilities have no communication plan and no staff dedicated to communications and community outreach work.

Even when utilities do proactively communicate, the focus is primarily on sharing information the utility assumes the customer is seeking rather than a direct response to the actual questions, conversations and perceptions developing within the community. In addition, most utilities communicate solely with the rate-payer, which means that consumers who rent or commute into a community to work may not receive direct information about their local drinking water and wastewater services. In the absence of more accessible and engaging information from their water provider, consumers may seek out answers or clarification elsewhere. These sources can range from anecdotal and inaccurate to factual and science-based. And the anecdotal information is often a bite-sized, easy-to-understand graphic whereas the more nuanced and complex information may not be distilled into an approachable format for the typical consumer. The result is a variable consumer understanding of water quality and services.

A Growing Infrastructure Crisis and Rising Affordability Concerns

To further complicate the communication challenge, the cost to provide water and wastewater service is rising and its infrastructure is failing. By AWWA's own calculation, in the U.S. an estimated $1 trillion investment is needed to maintain and expand service over the next 25 years. For many utilities, investments in infrastructure and updated technology have been deferred for decades because of a lack of political will to increase rates and concerns about maintaining affordable service.

As rates rise, public outcry in some communities has intensified due to lack of public understanding of the true cost of providing service. This environment makes it easy for a customer to be skeptical of the utility's spending and may lead to an unfounded perception of financial mismanagement. Utilities now face a serious problem—balancing affordability while making significant investments in aging and failing infrastructure. These challenges have forced utility rate increases that leave some customers struggling to pay their bills and some utilities struggling to maintain long-term financial sustainability.

The Rise of Social Media

The explosion of social media over the past decade has changed how we communicate, but water utilities have been slow adopters of these new communication channels. Even utilities with longstanding communication programs have focused on standard channels like news releases, bill inserts and mailed notifications. A 2017 WRF project found that a small minority of utilities are using social media. Even water utilities that do use it are only connecting to a fraction of the population they serve. Perhaps most problematic as it relates to the new media environment, the research found that most utilities aren't giving customers the information they want on social media.

Social Media's Influence:

- Facebook is the most widely-used social media platform among customers, and 74 percent of users visit at least once per day. *(Source: Pew Research Center)*
- Twitter has emerged as a primary source for the news media. *(Source: The Washington Post)*
- Nextdoor is available in more than 90 percent of neighborhoods across the United States and is a popular platform for local community conversations. *(Source: The Atlantic)*
- Advocacy organizations use a variety of social media platforms, but Facebook and Twitter dominate. *(Source: HuffPost)*

Social media provides a platform for consumers to engage and connect on a global scale. They can share information, raise awareness and rally support for issues they care about and reach beyond friends and family to hundreds or thousands of users on numerous social media platforms. This communication channel feeds the public's increasing expectation for engagement and information about decisions that affect them.

Indeed, social media has empowered the consumer. If leveraged correctly, social media can build support for and provide understanding of public interest issues like drinking water and wastewater treatment. If ignored or used to spread misinformation, the result can cause devastating impacts for a water utility. Inadequate, inaccurate and malicious information can cause reputational damage, a loss of support for a project, or worse, widespread panic.

For many utilities, communicating on social media is daunting. Few small- and medium-sized utilities have the resources required to maintain and manage a robust social media program. Even large utilities with professional public relations staff must dedicate resources to ensure two-way communication happens in real time. Some utilities have

activity on social media platforms like Facebook, YouTube and Twitter and balance that limited engagement with anecdotal reporting from employees who come across comments on their personal social media accounts. This can leave utility leaders informed about a conversation but with no opportunity to engage in or impact it.

Advocacy and Misinformation Campaigns

In today's media environment, utilities are competing for attention with accomplished advocacy voices that have leveraged social media and used the water utilities' past silence to establish themselves as influencers on water issues. Many of these voices are helpful in raising awareness of important issues and have a genuine interest in improving water quality and protecting the environment. However, some of these influencers have an economic interest in capitalizing on the public's growing concern about water quality to sell various products and services. Others are political advocates aiming to build a policy platform to recruit new supporters or dues-paying members.

Many influencers use fear-based messaging as a highly effective tactic for establishing themselves as a credible voice to consumers. They then advance their position or product as a solution to the perceived "fearful" problem and recruit supporters for their own political or economic gain. Scaring consumers and increasing skepticism around utility services is relatable and engaging to consumers and hard to refute with the fact-based, infrequent communication methods currently used by many water utilities.

As a result, during a water quality event, other interested parties are successful in using their more established platforms and wide-ranging social media networks to drown out the often-quiet voice of the water utility. They can play off the fears of consumers to create sweeping misinformation campaigns that benefit their interests.

To combat this type of misinformation campaign, water service providers need to understand the motivations behind these interests and engage and reassure consumers through proactive risk communication.

Risk Communication Strategies Can Help

The objective of risk communication is to return the conversation to one of reasoned discourse as quickly and easily as possible, while decreasing community angst and increasing your reputation as a trusted source for information about community water services.

In 2002, Daniel Kahneman and Vernon Smith won the Nobel Prize in Economics for research demonstrating that when fear is present, people process information differently, and the science of risk communication was born. This research showed that when people are emotional, they shift their brains' information processing to the primitive amygdala. The only decision under consideration in the amygdala is how to be safe–should I flee, freeze or fight? When you are speaking with someone—in person or through social media—who is angry or emotional, it is critical to remember that they are processing everything as a fight response necessary to keep them safe. Risk communication best practices are designed to make people feel safe enough to return to reasoned discourse where broader information and considerations beyond immediate safety can be applied to decisions.

The ability to connect with audiences who are angry or emotional is an increasingly valuable leadership skill for utility professionals. Utilities can significantly diminish the consequences of the spotlight by applying risk communication best practices both proactively and during a crisis.

The following sections contain strategies, actions, examples and messages you can use to bring risk communication best practices to your utility.

Become the Trusted Source for Community Water Information

Water utilities should strive to be the trusted source for information about water in their communities. Trusted sources lead in times of crisis, are rarely targeted for a negative campaign and quickly and easily recover if they are targeted. For example, trusted sources pass rate changes with community support and are viewed as community thought leaders for emerging challenges. In times of fear, uncertainty and complexity, people turn to trusted sources. Utilities can become this trusted source through proactive, regular communication and engagement, and the messages you share do not have to be slick, expensive or hard to develop to be effective.

Engaging in a proactive communication strategy will:

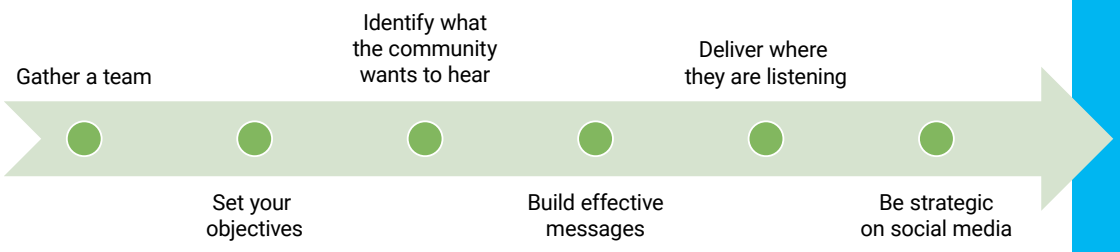
- Decrease the odds of being selected by an advocacy group for a future negative media event;
- Increase your ease in responding effectively to a negative media event;
- Increase your community's understanding and support for the services you provide; and
- Increase your community's perception of you as a leader and trusted source for information.

Lack of communication sets you up to:

- Experience the worst if you find yourself in a media challenge;
- Lose support for future rate change requests;
- Lose support for infrastructure needs; and
- Decrease community understanding and appreciation of the services you provide.

Utilities can implement a six-step process (Figure 1) to create an effective, proactive risk communication program designed to reduce exposure to a future negative media spotlight.

Figure 1: ***Six steps for building a proactive communication program***



1. Gather a team

Don't go it alone. Start by identifying who can help you. In addition to providing support now, collaborating on proactive messaging sets you up to have a strong team when you really need it—in the event of a negative media spotlight.

Work closely with your public relations staff, if you have one, and your technical staff. Collaborating with technical staff ensures messages are accurate. In addition, technical staff bring viewpoints that help address a broader range of public concerns. For example, in this guide you'll find a case study on Aqua Pennsylvania that explains how it created a communication team in its technical services department that bridged the gap between customer questions and technical responses to address community concerns.

Look outside your organization for proactive communication team members. You want to identify potential team members that have knowledge about water and public health and are trusted by the community. Research indicates that professors, teachers and health departments (local, state and federal) are typically considered highly-trusted sources, while even local government officials tend to be in the middle on the trust scale.

Those in political and leadership positions like mayors and city council members, as well as environmental and health leaders in the public, private and non-profit sectors, can also be good team members. Developing collaborative relationships now can keep you from having to do all the heavy lifting in a time of crisis.

2. Set your objectives

The objective of all communication is to create change. The more specific you are about the change you want to see in response to your communication, the more likely you are to achieve it.

Defining the objective is, perhaps, the most critical step in any form of communication. If your utility is new to proactive communication and your community is used to hearing from you only through a bill, make your objective foundational. For example, your objective might be to build understanding of the value of the services you provide. The Additional Resources section at the back of this guide can help you deliver foundational messages and become more proactive in your communication.

Reaching one communication objective often requires attaining a series of sub-objectives. For example, if you want your community to have a better understanding of the complexity surrounding per- or polyfluorinated substances (PFAS), you may start by setting an objective for consumers to understand where PFAS come from. Identifying the sub-objectives needed to meet a broader goal is a great way to keep your communication focused and build your voice as a trusted source.

Address concern of escalation: If escalation is a concern, repeat your core message over and over using all your delivery routes. Get as many trusted sources as possible to contribute to the conversation using the same core message. Repetition is very reassuring. Make sure your core message is caring, names the concern and stresses that you agree that the concern is legitimate, and you have experienced this type of concern yourself.

Setting objectives is an iterative process and requires consideration in each step. For example, different team members may have different ideas about the best communication objective for the community, or they may have opinions about what order the sub-objectives need to be addressed. It's fine to have external team members, technical staff and management with different objectives; the trick is to list everyone's ideas freely and then work together to set priorities.

If your objective is to build community understanding about a topic that is beginning to appear in the media, be strategic. Receiving abundant amounts of information can be overwhelming to some people; it can make them trust you less and potentially escalate the situation. When there is significant uncertainty and complexity, provide information in layers, always addressing what the audience wants to know. For example, talk about health effects right off the bat if that is what the community is discussing, but also provide your core message over and over, so they are hearing a steady, confident, "we've got this" message.

3. Identify what the community wants to hear

It's easy to identify what *you* want to tell your community, but not as easy to identify what *your community* wants to hear. One of the fundamental principles of risk communication is to consider and respond to what the audience is interested in hearing. Addressing the questions already in the community's mind creates strong engagement and makes it easier to create effective messages. The best way to know what your community wants to hear is to ask them! If you don't have resources for focus groups or a survey, ask the group of community influencers you selected in Step 1 to identify topics their constituencies are concerned about. Work with your team to identify one or two common themes across groups.

Research shows that *questions of critical concern* contribute significantly to emotional angst until they are addressed. The emotional need to address the question creates a barrier to receiving new information and understanding the issue.

Once you have created a voice by talking about what the public is interested in hearing, consider expanding your communication to create understanding about a potential topic of concern. In Appendix B you'll find Quick Response Sheets addressing topics with complexity and uncertainty that could lead to community concern. Figure 2 provides the list of these topics. The Quick Response Sheets provide examples of questions of concern and responses written using risk communication best practices. Use these as communication shortcuts, but don't use them instead of listening to what your community is asking.

Figure 2: ***Current high probability crisis topics identified for this guide:***

1. PFAS
2. Lead
3. Fluoride
4. Challenges related to lack of infrastructure funding
5. Reported SDWIS violation
6. Affordability
7. *Legionella*
8. Cyanotoxins
9. Management/fiduciary responsibility concerns
10. Chloramines
11. General water quality (i.e. there is something "bad" in the water)

Typical questions of critical concern include:

- Where does this problem come from?
- What are the potential consequences to me and my family?
- What do I need to do to protect myself and my family?
- What are you doing to protect me and my family?
- What else can I do?

4. Build Effective Messages

Words matter, and there are simple techniques you can use to develop messages that create connections and new understanding. Think about building messages in two parts: 1) Create an emotional connection and 2) share information using the 27/9/3 Rule developed by Dr. Vincent Covello and the Center for Risk Communication.

Create an emotional connection

Communication is processed through emotional synapses in the brain. Incoming information is unconsciously sorted using emotions to determine where to focus. Use this knowledge to your advantage. Start by connecting to audiences through a shared value. For example, *we are all here today because we care about the safety of our community drinking water.* Emotional connectors create engagement and set the tone for the rest of the communication.

Share information using the 27/9/3 Rule

You can probably think of a lot of information that could be included in responses to community questions, especially if the community needs to understand emotional, complex or uncertain topics. However, brain research informs us that most people can only process up to 27 words that can be spoken in 9 seconds or less and have three or fewer pieces of information. Anything more than this diminishes the power of the message. This means that the first step in developing effective messages is to identify the specific pieces of information that are most useful to the audience.

You can still share a lot of information, but to meet audience needs it is best to deliver information in layers. Delivering information in layers using the 27/9/3 Rule works great for social media.

To develop answers to the questions in your community members' minds, start by listing all the information you could use to address them. Then prioritize which pieces of information are most important to the audience. Remember that questions of critical concern form barriers to learning so always start with addressing what your community is talking about and keep it extremely simple. When you have your list prioritized, pick the two pieces of information you think are most important and combine them with the fact that you care about the issue and the audience. Risk communication best practices require that one piece of information you share in every message right away is that you care.

Create a common core message

Now that you have prioritized what information to share, take your three priority pieces of information and work them into a message that is no more than 27 words. Don't worry about the exact number, but keep it short. If the communication channel you are using is social media, adding a visual to your core message helps build understanding.

For example, in the cyanobacteria-related message illustrated in Figure 3, the three pieces of information being shared are:

1. Together we can protect our water sources (we care);
2. Algal blooms can be reduced; and
3. We need to reduce nutrients from septic tanks and garden fertilizers. This message also infers an action someone can take to reduce blooms, which makes the message even more powerful.

This example message is designed to be part of a broader message campaign to increase understanding of cyanobacteria and cyanotoxins, and is not intended as a stand-alone message.

Figure 3: ***Example of risk communication-based social media post using a core message***

5. Deliver where they are listening

Getting people to listen to your message in this information-overloaded world is a challenge, especially when it is complex, uncertain or creates anxiety. To effectively communicate, you must use your own communication channels and those of community influencers to reach people where they are already listening.

People do not seek out answers to complex, uncertain risk. Instead, we listen for answers from those we are already listening to—even if they don't know anything about the topic!

Although much of the focus in this guide is on social media, take advantage of the full range of proactive communication opportunities available to you, including community meetings and forums, forging relationships with reporters and direct communication channels you may already be using.

The links in the Additional Resources section at the back of this guide provide you with the latest water utility communication research and best practices.

Use your community influencers' communication channels to reach people where they are already listening. Reach out to your community influencers that you identified in Step 1 and ask them what they think their audiences are interested in knowing about water. Identify the communication channels they use to communicate with their audiences and offer to share materials for their delivery channels (see sample ideas to the right). Given the need for content, most leaders will be happy to share your information.

Leverage the social media platforms of these community partners for greater exposure:

- Other utilities – solid waste, energy
- Chambers and economic development organizations
- Faith-based organizations
- Libraries
- City councils
- County governments
- Neighborhood associations
- Environmental organizations

Social media is a great way to identify and participate in audience-specific proactive communication. Identify local community web and social media sites that might provide access to community members with potential concerns about water. Work with these social media site managers to develop opportunities for posting on their site.

To share information on another owner's site, reach out to the owner with a specific opportunity and explain why and how their members will benefit.

6. Proceed carefully on social media

Communicating on a social media platform is different than any other communication channel. You are communicating in real time, you have no idea who is watching you nor what they are doing with the information you are sharing. You also may not know whether the person you are responding to lives in your community or a thousand miles away.

The anonymity, pace and viral nature of social media can make it especially challenging to use during a risk communication event, but it is the communications channel of choice for many consumers. No utility wants to be on the receiving end of a negative social media onslaught or organized campaign. If the social media spotlight gets turned on your utility during a risk communication event, there are some essential techniques you can use to enhance your reputation and combat misinformation.

First and foremost, the best strategy is to be prepared. Here are some steps you can take now to provide you with a framework should you need to deal with bad publicity on social media in the future:

Create a social media policy for your employees

Sometimes bad publicity on social media can start with employees. Establish a policy that specifies what is appropriate use of social media, your expectations for who can use your utility's accounts and how to deal with customer information on social media. This

is key and can prevent the sort of crisis that ensues when an employee posts something inappropriate on a private account or on your utility's platform.

While you are developing your social media policy, make sure your accounts have strong passwords and that you change the passwords after employees leave the utility or move to other positions that don't require them to post on social media accounts. Managers of employees who access your utility's social media accounts should also know how to limit or revoke access to the accounts in a social media crisis management situation.

Create an external social media usage policy

Develop a written policy for engaging with external users to moderate conversations in a professional and open manner. Your policy should explain when you will delete a comment or ban users and outline how you will handle discord.

The policy should include guidelines on what constitutes acceptable comments and what does not, and what actions will be taken for comments that do not meet these standards. Your policy should be visible to social media users so that you can refer to it when needed in response to those that may be in violation of your policy.

Pay attention to what is being talked about

Social media can provide valuable insight into potential communication issues well before they start to register or escalate with your customers. Follow your local elected officials, neighboring utilities, influential community and environmental groups, and state and federal regulatory agencies to see what they are posting and how people are responding to issues they are dealing with. AWWA's Water Utility Insider highlights upcoming and current issues and can support your understanding of the nature and penetration of community issues.

Identify issues that could pop up in your community and start to prepare your response now. Even if an issue is unlikely to occur in your area, be aware of it and prepare a response. When water news is shared via social media, it is often shared by several sources and can seem very local when the story may be about something happening in an entirely different state or region. This can sometimes make people feel as if there is an immediacy and local connection when there isn't. Sometimes information being shared isn't even current. It's not unusual to see an older article, tweet or concern reappear after relative dormancy.

If your staff resources are strained, consider hiring outside assistance, as some utilities do, to monitor water issues being talked about on social media and through traditional media outlets.

Develop hypothetical responses to potential negative social media comments

It's a common occurrence for a customer to complain in an email or during a phone call. What if those complaints were posted on your Facebook page? Thinking through how you'd respond and documenting that in advance can help staff react quickly if you are suddenly thrust into a negative social media situation where comments are coming at you quickly.

Some utilities create editable documents that live on the organization's intranet or a shared file. As staff work through difficult comments their responses can be documented and used for the next encounter. Of course, you can't capture the answer to every single complaint you will ever receive, but it will give staff a greater idea of what the utility expects when negative situations arise on social media.

Set a standard response time

Social media is not a "set it and forget it" communications channel. To be effective you must monitor your platforms regularly and consistently and respond within a reasonable timeframe. What's reasonable? In most cases social media users expect a response within hours, not days, especially if they are reaching out to you about a concern or complaint. This can be a challenge when a comment comes in after typical business hours—which frequently happens.

As water utilities know, main breaks seem to happen during evening rush hours and weekends. Similarly, negative social media inquiries don't always occur Monday through Friday between 8 a.m. and 4 p.m. And just like main breaks, social media complaints are highly visible with people watching and evaluating how you respond. If you wait until Monday afternoon to respond to a customer that says they just got home from work on Friday to find rusty-colored water coming from their faucets and then several other commenters say they have the same problem, what does that say about your utility's customer service?

Determine what an appropriate response time for your utility is and make sure you assign staff coverage for that timeframe. This will likely mean that someone on your communications staff needs to be responsible for checking your social media accounts at night and on weekends to ensure that any comments or inquiries are handled in a timely fashion. It is also helpful to have someone from your water quality or operations staff available at these times to assist the communications staff with technical responses if possible. However, people are generally understanding of a response that says you are looking into the issue and would like to connect the customer to your emergency services team offline during non-business hours.

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Understand that you will receive negative comments

People will disagree with you, just like in real life. But social media can mask tone and intent. Just because someone disagrees with you doesn't mean that they are attacking you or your utility.

Recent research finds that customers that routinely express strong emotion at utility public meetings represent the opinion of less than 10 percent of customers. This thought may also apply to those that comment on social media. Don't assume the comments you see represent all customers.

When exchanges seem emotional or heated, use caution when you respond so that you don't appear defensive. Some social media users—especially those on Twitter—expect you to debate them; it's how the medium works. Social media is a 24/7 presence, and listening and responding quickly to negative comments using a professional and human tone can go a long way toward keeping a situation from becoming bigger than it ought to be.

Help! A Negative Media Event is (Maybe?) Happening Right Now!

The negative media light is shining on you.

Swallow your fear and let your risk communication skills show the community how safe they are because of your leadership.

No one wants this kind of attention, but there are ways to address it that can tamp down opposition and maintain your reputation. When time is of the essence and you need to decide how to respond to a negative spotlight, this section can help you turn the situation into a leadership opportunity.

Increase your leadership skills by adding risk communication best practices

Knowledge of psychology and brain research will help you determine what to say and how to say it in a crisis. This valuable knowledge is the basis for the techniques shared here to get you and the community out of emotional turmoil quickly and responsibly. This will increase your ability to provide leadership when media or an advocacy group is expressing concerns about public health, the environment or your utility's actions.

1. **Change your communication objective.** Simply put, no one will listen to your facts, information, data or evidence until they know they have been heard and you understand where they are coming from. When communicating with those experiencing fear or anxiety, you must shift your objective from creating understanding to focus on returning the conversation to a place where emotions are controlled, and information can be exchanged in a meaningful way.

Your communication objective when facing people who are emotional, angry or worried—in person, through the media or social media—is to return the conversation to one of reasoned discourse where information exchange is possible. Meeting this objective will help you meet your primary communication goal of being a trusted source for water information.

2. **Let your understanding of the brain's need for safety when fear is present guide your response attitude.** When someone experiences fear or strong emotions they shift how they process incoming information to their primitive brain processor—the amygdala. The only decision under consideration in the amygdala is how to be safe. Should I flee, freeze or fight? When you are speaking with someone, regardless of the communication format, they are processing everything you say as a fight response necessary to keep them safe. Therefore, if incoming information is routed to the amygdala, information exchange is limited and you must change your objective to letting them know they have been heard and you understand where they are coming from.
3. **Shift brain processing back to the frontal lobe where reasoned discourse is possible.** Science has found that specific communication techniques are effective for responding to people experiencing angst brought on by hype around an uncertain or unknown risk. These techniques have been summarized into easy-to-use templates (developed by the Center for Risk Communication). (See Figure 4 and in the section Additional Risk Communication Templates). To use these templates to the fullest potential, the Center for Risk Communication recommends you participate in a training or workshop.

For example, when confronted by a mother concerned about lead in drinking water, instead of responding with facts, try the CAP approach (Figure 4):

1. **CARING CONCERN:** Begin by naming her concern with a caring attitude. *I understand your concern about children's health and lead in drinking water.* Connect further using empathy. *The health of children is important to me and one of the reasons I work at/run a drinking water utility.*
2. **ACTIONS:** *Our utility has an extensive treatment and monitoring program to ensure the water we produce and deliver protects your family from the risks of lead in drinking water. Our monitoring findings are shared in an open and transparent way with our state regulators and summarized and shared with our community in our annual Consumer Confidence Report.*
3. **PERSPECTIVE:** *Our community water meets every EPA drinking water standard. We pay close attention to emerging research and our concerns about drinking water are always focused on the health of you and your family.*

Using this approach, rather than a fact-filled defense, increases your odds that even if she leaves angry, she will also leave with an increased respect for you and your utility. This approach also does not escalate the emotion—another key objective of any engagement with people in a state of heightened anxiety.

Figure 4: ***CAP Template***

Use when responding to a high-concern question or statement.

- **C**aring Message: Provide a message indicating caring, concern, empathy or compassion. The message should communicate the seriousness of the situation.
- **A**ction Message: State actions you have, are or will take to address the issue or problem. For example, the message might indicate you are cooperating with other organizations or investigating the situation.
- **P**erspective Message: Provide information that puts the issue in perspective or context.

Finally, don't panic or avoid dealing with this issue. Take a deep breath and realize that people's needs when they are upset are simple, (i.e. CAP) and that you have the skills and patience necessary to provide community leadership when you are in a media spotlight. But it takes practice. If you don't do it perfectly, or you don't think it is working, keep at it with kindness, and science shows it will work. Never be defensive. Always express caring concern. When in doubt, name the legitimate concern and provide empathy.

Managing Social Media Events

The onset of a negative media event can induce anxiety and fear in you and everyone in the utility. Having a plan of action for such an event can significantly reduce the anxiety and increase your ability to address all the nuanced needs effectively in a brief period.

This checklist of questions can help your utility address what actions you can take in a crisis to ensure responses to emotional media events culminate to increase your standing within the community as a trusted resource.

Do we need to respond?

This is a great first question. If you have received comments on your social media channels, respond to the inquiry directly, and reach out to the poster through a private message, and then monitor the situation. If a well-known person is associated with a series of posts or the number of your customers expressing concern is large, you need to respond quickly. If in doubt, use the checklist of questions below to help you determine if you should respond.

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1. Who will decide?
   - If you do not have an established communication team, gather the utility spokesperson (often the general manager, a topic-specific technical expert and public relations staff, if you have them). Ask these resources who else should be included and is available.
   - Should anyone from the outside be included? For example, in the case study provided in this guide, Aqua Pennsylvania included their state primacy agency and the Environmental Protection Agency (EPA) in their response to chromium concerns in the community due to a lack of available materials about chromium in drinking water.
2. What information do you have available to help you decide?
   - Define the topic
     - What is the specific set of issues, timing, utility actions, etc. being raised?
     - What is your utility's role around this specific set of issues?
   - Articulate the consequences
     - Is this a crisis or annoyance?
     - What are the possibilities and probabilities of the event growing?
     - What is the reach, if on traditional or social media, of the platform? How many people are currently connected and what is the potential for growth?
   - Characterize the participants
     - How concerned are your customers? How many are involved?
     - How concerned is your utility governing body?

- Is an advocacy group involved? Any involvement of a well-organized entity increases the potential consequences by increasing the likelihood of extensive media involvement.
- Are the interested parties part of a specific group? Are they considered trusted sources?
- Does someone else in the community have the lead on this one?
- Is another agency counting on you to take the lead?

- Characterize the context
  - Have other utilities experienced this and had it escalate?
  - How is your community likely to respond to this kind of event?
  - Are there other local, state and national news stories that may have an effect?

Who do we respond to? What do we say?

Consider how you will respond, and what you will say, to each audience and on each delivery platform.

- Always start and end by communicating with *your employees*. If there is a media event many people within the utility may be asked about it, therefore it is critical that one of your first responses be to internal staff. If the assessment results in a decision not to respond to the public, you may want to consider telling your employees why you are not responding.
- *Governing members, city councils and other local officials* want enough information to feel informed and to be able to respond effectively. Provide them with information from the Quick Response Sheets (if applicable) and the information you provide to your employees. If the event is serious, bring them to the planning table.
- *Health departments and primary agencies* also want enough information to feel informed and to be able to respond effectively. Provide them with information from the Quick Response Sheets (if applicable) and, if appropriate, information you are sharing with your governing members and employees. These agencies may also be good sources for more information.
- Regardless of the forum, remember you are always talking to *the public.* The next sections provide risk communication strategies and lessons learned from case studies to help you effectively reach the public during a media spotlight event through social and traditional media and in person.

When fear, anxiety and emotions run high—run to your audiences, don't wait for them to find you.

How do we react to negative social media publicity?

As this guide's case studies demonstrate, the nature of social media makes it ripe for misinformation, and advocacy interests can use this to their advantage. The result can be a situation where a utility must react to a rising tide of criticism in real time on its social media platforms. In this situation there are eight key steps you can take to help maintain control.

1. **Respond quickly.** Respond in short order even if you must provide a "hold message" to the commenter letting them (and those who are watching) know you are looking into the issue. A statement like this can be used to great effect and will show others who may be watching that you are responsive: "Thank you for letting us know about this issue. We've contacted you directly and provided you with a staff member's contact information, so we can keep you updated and work together to resolve this problem."

One thing is for sure, if you sit back and do nothing in these situations, you risk having the issue escalate and spiral out of control.

2. **Use a human tone.** Upset customers need empathy and a friendly, caring tone. The words you use when you are communicating in the spotlight matter a lot. People will judge them immediately so make sure they are well thought out.

   "We are so sad to hear about…" sounds better than *"A regrettable incident has occurred."*

   Place yourself in the consumer's shoes to understand how they will view the response you provide.

3. **Tailor your responses.** It is very tempting to quickly respond to a complaint or concern with a link to your website: *"Please see the information on our website about lead service line removal."*

   But if the comments you are receiving are coming from a customer who is expressing concerns about their child's health because of a lead service line removal effort your utility is engaged in, you'll sound like you don't care. Instead try: *"We are very concerned about your worries about your child's health and drinking water. I've contacted you through a private message because I want to have someone with more knowledge about this concern call you. In the meantime, if you are interested, we have information about our community drinking water and lead on our website."*

4. **Take responsibility.** Ignoring a customer's concern will aggravate them and potentially others who may be watching for your response. If this issue is something under your control take responsibility and be empathetic. If an apology is appropriate, make sure you do it visibly and genuinely. *"I am so sorry you had this experience; this should never have happened. We take full responsibility and will work hard to make sure it doesn't happen again."*

5. **Be visible.** Unless the comments you are receiving contain violent or offensive language, be transparent and open when responding to negative social media. Deleting or hiding comments will only enrage the commenter, who will then turn to other communication channels to express their concerns. The words "open and transparent" are very powerful community connectors; be sure and use them. *"The results of our water quality tests are shared in an open and transparent manner with those who oversee our agency, our state regulators and our community in our annual Consumer Confidence Report."*

6. **Try to move commenters offline.** When responding to comments that would be better handled by phone or in-person, offer to do just that. Keep your responses short and avoid getting drawn into a discussion of what went wrong. Move the conversation to private messaging. Doing so shows you care about the customer and you want to spend time to help them with the issue. *"We want to address your concerns about your child's health and drinking water. I sent you a private message so that someone with more knowledge about this concern can contact you."*

7. **Pause scheduled social media posts.** If you schedule your social media posts in advance, you need to stop them immediately. If you are dealing with a risk communication situation on social media, nothing is worse than having a fun, quirky post pop up in the middle of it. Your utility will appear insensitive to the issue at hand.

8. **Communicate internally about your social media interactions.** Ensure everyone in your organization is on the same page about who will speak and what will be said to prevent misinformation from spreading and to keep communication with customers consistent. You don't want to be communicating one message on social media while providing contradictory messages in emails from your customer service team. Make sure everyone knows what they should be saying about the issue.

Do's and Don'ts for responding to a social media attack

Social Media Spotlight Do's and Don'ts	
Do	**Don't**
Respond quickly – within hours	Wait and see, and respond days later
Take the conversation offline	Engage with the customer extensively about their concern on the platform
Use a human tone, expressing empathy	Respond in "corporate speak"
Tailor your responses to the comment	Make the same generic response to every comment
Assume good intent	Take comments personally and respond in kind
Look into the issue quickly and post the resolution	Ignore the issue
Allow negative comments to be posted (if it meets your policy)	Delete negative comments
Monitor all your comments	"Set it and forget it" and check on your social media accounts infrequently
Thank positive commenters	Ignore those that take the time to tell you you're doing a good job

Do's

- If you find yourself under attack with misinformation rapidly spreading through social media, quickly provide a stream of proactive, accurate messaging at the target audience—your customers. Repeat your message often and in communication channels other than social media.
- Increase your power by communicating positively and consistently to those that matter.
- Use relationships with your customers and other community thought leaders and influencers (public, private and non-profit) to get out your message about an issue. Send them information and ask them to share it on their platforms with their audiences.
- If the attacker or advocacy organization offers some sensible ideas, incorporate those quickly in your response; this will help suck energy out of their position and let the more irrational ideas they are expressing sound flat.
- Communicate areas of agreement on social media and thank the opposition for their input.
- Be aware of the lasting consequences of all your comments. More than likely, this will be an ongoing attack for some time. As you respond you will create a public record on social media of your engagement. Your consistent and professional responses will demonstrate a trustworthy and responsive image to current customers.

Don'ts

- Do not use any of the attacker's terms, images or hashtags. This will only strengthen their position and connect your utility with that image or term in the consumer's mind.
- Do not respond to trolls– people who purposefully respond to social media posts in highly contrary, negative ways to provoke a response. You've probably seen this happen in other places on the Internet. A good rule is to just ignore them. Responding only adds fuel to the fire. If a troll continues to be inflammatory or is posting in conflict with your external social media policy, block them.

Additional Risk Communication Templates

The overall risk communication best practices listed above can be used in any situation. To make it easier for you to respond to specific situations, the Covello Center for Risk Communication created a series of risk communication templates with easy-to-remember acronyms.

Each template in Figure 5 is designed to address a specific communication situation. For example, the *CAP template* is designed for **responding to a high-concern question or statement** while the *False Allegations* template is useful when you need to **reply to a hostile question, false allegation or criticism**. Examples for how to use each template, using high-risk topics, are provided in Figure 6.

Figure 5: ***Risk Communication Templates for use in high-concern, high-stress situations.***

AAF Template	CAP Template
Use when the immediate goal is to build, maintain or restore trust. • **Acknowledge Uncertainty Message:** Identify knowledge gaps and challenges. • **Action Message:** State actions you have, are or will take to address the issue. For example, the message might indicate you are cooperating with other organizations or investigating the situation. • **Follow-Up Message:** Provide information on where people can obtain timely and credible information.	**Use when responding to a high concern question or statement.** • **Caring Message:** Provide a message indicating caring, concern, empathy or compassion. The message should communicate the seriousness of the situation. • **Action Message:** State actions you have, are or will take to address the issue or problem. For example, the message might indicate you are cooperating with other organizations or investigating the situation. • **Perspective Message:** Provide information that puts the issue in perspective or context.

Caring/Sharing Template

Use when responding to a question or statement containing incorrect information.

Caring Message: State what you and the person holding the incorrect information have in common.

Sharing (1) Message: Invite the person holding incorrect information to share their information with you.

Sharing (2) Message: Reshare your information.

Example: (1) *I assume you asked this question because you care about…, which I also care about,* (2) *I would greatly appreciate your sharing with me all the information you have so I can review it;* (3) *In the meantime, the information I have indicates…*

False Allegation Template

Use when responding to a hostile question, false allegation or criticism.

- Repeat/paraphrase the question without repeating the negative; repeat instead the opposite; the underlying value or concern or use more neutral language.
- Indicate the issue is important.
- Indicate what you have done, are doing or will do to address the issue.

Example: (1) *"You've raised a serious question about "x";* (2) *"x" is important to me;* (3) *We are doing the following to address "x."*

Source: Dr. Vincent T. Covello, Center for Risk Communication, Copyright 2009.

**These templates are not stand-alone tools; their successful use requires a substantial knowledge of the principles of risk.*

Figure 6 provides samples that you can modify to use risk-based message templates in your social media platforms.

Figure 6: ***Sample statements***

AAF Template

Use when the immediate goal is to build, maintain or restore trust.

- **Acknowledge Uncertainty:** *The research about the risk of disinfection byproducts to human health is not clear and is even sometimes contradictory.*
- **Action:** *To protect our community from potential health concerns, our utility meets all federal and state regulations and stays current with emerging research.*
- **Follow-Up:** *For more information call <<phone>> or visit <<website.>>*

CAP Template

Use when responding to a high-concern question or statement.

- **Caring Concern:** *Lead and children's health is an extremely legitimate concern. I work at <<utility>> because I care deeply about public health.*
- **Action:** *We've heard that the community may have heightened concerns about lead and drinking water and we want to have an open and transparent conversation. Over the next few weeks we will be posting information about the actions we are taking every day to keep you and your kids safe.*
- **Perspective or Context:** *I am proud of our utility record of meeting or exceeding all public health standards.*

CAP Template

Use when responding to a high-concern question or statement.

- **Caring Concern:** *Lead in drinking water is a legitimate public health risk, and we work every day to protect your family from lead exposure.*
- **Action:** *One action we take is to treat our drinking water so that it lowers the risk of lead coming from household plumbing. We then test and monitor our water. Those results are reviewed by state regulators—we are open and transparent in our efforts to keep our community safe.*
- **Perspective or Context:** *High levels of lead exposures in drinking water, like the one that occurred in Flint, MI, are often due to significant changes in source water or treatment. We are not planning any significant changes, and if we do we will let you know in advance.*

  Include photos of staff testing water quality samples.

Caring/Sharing Template

Use when responding to a question or statement containing incorrect information.

- **Caring:** *We are both here today because we care deeply about public health and drinking water and are concerned about…*
- **Sharing** (1): *To ensure we are using the latest information and all the best treatments and processes to protect public health we review information from EPA, CDC and the Department of Public Health. I would be happy to share my sources with you.*

  Insert lead and homeowners' social media post from EPA – with citation.
- **Sharing** (2): *Do you have sources of information that I might not be using? Here is my card, if you could send me your sources I would be very appreciative and promise to review them and get back to you.*

False Allegation Template

Use when responding to a hostile question, false allegation or criticism.

- **Repeat/paraphrase the Question:** *You've raised excellent questions about the affordability of our community's safe, reliable drinking water.*
- **Importance:** *Clean, reliable drinking water is an essential need, and it is important to us that everyone in our community have equal access.*
- What are we, or will we, do to **Address the Issue.** *<<Utility>> provides customer assistance programs. If you or someone you know needs assistance to pay a bill please call <<phone>> or visit <<website.>>*

Engage the Public in Person

Consider meeting and talking to the public, face-to-face, where they are. Find existing community meetings and ask to present or provide information to attendees. Look for neighborhood association meetings, homeowners' associations, town halls hosted by local elected officials, community groups, rotary clubs, chambers of commerce, etc. In some cases, it may be valuable to host your own event to ensure your message comes across accurately and to show your responsiveness in person as you spend time talking to your customers and answering their questions.

Some techniques to consider:

Partnering with a third-party advocate to host informational events. Aqua Pennsylvania and Horsham Water and Sewer worked with the U.S. Environmental Protection Agency (EPA), the U.S. Navy, local health departments and the state department of environmental protection to hold two outreach events to inform the community about PFAS. They used a science fair format that was highly successful at creating a one-on-one educational experience rather than a forum for mob response. EPA trained participants and provided messaging and informational material.

DutchMen/shutterstock.com

Tours. North Texas Municipal Water District invited a local water quality advocacy group to a briefing and tour of their treatment plant to have a conversation to help allay fears and provide information.

Attend community events. The City of Ann Arbor developed a calendar of "Water Pop-up Events." Staff trained to talk about water treatment and water quality "dropped in" to existing events (farmers markets, library events, community festivals, etc.) to answer questions and provide information. They have created a water drop mascot that attends these events with staff to welcome people and spark interest.

When you must appear in a public forum, be ready to receive public angst

Anyone who has ever experienced a public forum with a mob of angry constituents understands that a public podium event is not supportive of meeting the communication needs of people who are angry or afraid. However, even knowing this viscerally does not always prevent it from happening.

Providing compassion when being attacked is an incredibly valuable leadership skill, and unfortunately one that is increasingly needed by water professionals as public perception about water risks increase. Fortunately, the science of risk communication provides strategies for success in this potentially hurtful, no-win situation.

One key to success in this situation is to shift your objective. This situation is not an opportunity to educate anyone or to change anyone's opinion about anything. But you can increase respect for yourself and the agency through your response. Shifting your objective provides an opportunity to be there for your community exactly where they are, without judgement about where they are, so that you can bring them along for the whole ride.

Another key to success in this situation is to apply neuroscience-based best practices for responding to people who are in high levels of angst. These practices, elaborated on in Figure 7, include:

1. Let them know you are listening, you care, you are being honest and transparent and are competent.
2. Connect emotionally. All communication occurs through an emotional receptor in the brain. Find and access that entry point.
3. If appropriate, share one or two benefits of the issue to individuals or the community.
4. Provide them an action they can take that increases their control over the situation.
5. Tell them what you are doing to include their concerns in your actions and how they can follow-up to see what you do.

The strategies and templates above can be applied whenever you are confronted by an individual or group expressing high levels of concern or even outrage about a perceived risk. The individual attributes can be used together or individually depending upon the situation. However, naming their concern and emotionally connecting with the speaker (CARING CONCERN) is critical in every interaction.

Figure 7: ***Best practices for responding to questions or concerns from audiences with high perceived risks or outrage using incomplete or incorrect information.***

- **CARING CONCERN:** The priority for most people lining up at the podium is to be heard. And until you name their angst, and you connect emotionally with their concern, they will not feel heard.

  Example: *I hear that you are seriously concerned about the health effects of chlorine residuals in drinking water. As your community drinking water provider, your drinking water safety is my primary concern.* (Don't add, at this time, your instinctual defensive information. Keeping your mouth shut and knowing when not to say anything is the most important attribute of an effective listener.)

- **Share the benefits/consequences:** If you are given an opportunity to share, focus on one or two benefits to individuals, the community and the utility.

  Example: *Perhaps the greatest public health risk from drinking water is from fecal coliforms, which can cause diarrhea, cramps and difficult to treat debilitating diseases like giardia.*

- **Share who is watching you:** If possible, show that a trusted source is providing oversight to your hard work.

  Example: *We use disinfectants to kill fecal coliforms, including chloramines, based on recommendations provided by and monitored by EPA. We use the latest and best actionable information to protect our community drinking water.*

- **Increase their perceived control over the situation and your openness:** Lack of understanding and control contribute significantly to ungrounded angst. Providing an action that a speaker can take to increase their personal understanding and control over the perceived risk can significantly reduce their angst. Walking your talk by providing an opportunity for follow-up can significantly reduce on-going angst. At a minimum provide a link to your website for additional information and add information as needed to address new questions you heard from you community.

  Example: *Our utility is an open and transparent public health driven agency. To increase everyone's understanding of current utility operations and potential alternative options, we will be hosting an educational forum. If you have questions you want addressed, please share them with us at this link so we can be sure to address all individual concerns. You can find additional information about the educational forum and this issue on our website.*

After the Risk Communication Crisis, What Should You Do?

If you've survived the worst of a social media attack during a risk communication event, don't just return to business as usual—learn from it and use it to improve your communications.

Gather your employees and do a debrief of the incident. Examine what happened and review your social media record. There will be a lot to learn from it. Ask your employees to talk about their experience and offer suggestions for better responses if this happens again.

As you move forward communicating with the public, recognize that this incident may still be fresh in their minds. You'll need to tread a fine line between rebuilding customer confidence and avoiding creating a second wave of conflict. Don't appear cavalier about the event. If you've remedied the situation, now is the time to be positive about your track record.

Negative comments may continue on your social media channels. Resist the temptation to delete them as this can ignite a second wave of attacks. Focus on the positive. If you've made changes to address the issue, you can respond with a gentle reminder to that effect.

Appendix A: Case Study Insights and Lessons Learned

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North Texas Municipal Water District (Texas)

North Texas Municipal Water District (NTMWD) is a wholesale water provider serving 1.7 million customers in 80 cities and communities in 10 counties of North Texas. NTMWD provides water to one of the fastest growing regions of the country within a 2,200 square-mile service area.

Interviewed: Janet Rummel, Public Relations Officer

The Communication Challenge

Like many utilities, NTMWD uses chloramine for secondary disinfection. Every spring NTMWD prepares the system for the warmer summer months and—as a preventative measure—suspends the use of ammonia in the disinfection process and flushes free chlorine to clear the system of any bacterial residue. NTMWD has performed this treatment for more than 10 years. Standard communication practice for the annual flush was to provide a reminder to wholesale customers and issue a news release to keep the public informed about changes they may notice, such as a stronger chlorine smell.

In 2018, rainfall was heavy and water demands were lower just prior to the annual spring chlorine conversion. This resulted in a mix of chloramines and free chlorine staying in the system longer. This mixture, while safe, produces stronger odors in the tap water. Concerned citizens began asking questions with much of the conversation happening through the social media channels managed by cities that NTMWD serves. The cities referred inquiries primarily to the NTMWD main phone line for response. As a wholesale water provider, NTMWD has a limited relationship with the consumers of the water they provide. They do not staff a call center and traditionally rely on their wholesale customers (cities/utilities) to communicate with their consumers about water issues. However, as the odor issue gained traction, NTMWD communications staff were consumed with an influx of calls from consumers and cities wanting more information.

NTMWD found itself in a reactive position, scrambling to put together messaging to explain an extremely complicated system maintenance practice. The longer it took for them to respond, the more public skepticism and concern increased. Several resident activists, dissatisfied with explanations from NTMWD and its cities about the treatment process and the safety of the water, used social media to organize a local advocacy group. The local group was successful in gaining the attention of a national celebrity activist and was soon being featured on the activist's social media accounts along with anecdotal, inflammatory and frequently inaccurate or out-of-context information about chlorine and its impact on water quality and public health. Membership in the local group's Facebook page grew to more than 13,000 members within days as the initial group leaders added all their contacts and encouraged their contacts to do the same. Residents began posting photos of discolored water, medical conditions they attributed to chlorine exposure, and the results of at-home tests designed to measure chlorine levels in pool water.

The local group became more organized, creating a logo, T-shirts and signs and frequently attending local City Council meetings to voice concerns. Working with the national activist who had a local speaking engagement already scheduled, the local group organized a town hall with the celebrity activist as the featured speaker. Attendees were charged $20/ticket and more than 200 citizens attended. The group fed misconceptions about health issues by conducting their own survey of residents asking about symptoms and occurrences. The group tried to prompt NTMWD into action, requesting that they post test results for chlorine byproduct levels and that they implement new treatment processes requiring less chlorine. The advocates coordinated

attendance at public meetings, providing scripted and inflammatory testimony claiming that the water was causing a variety of health issues.

NTMWD was forced into a reactionary role for most of 2018. Staff resources were maxed out attempting to respond to concerns via phone calls, media requests and public meetings while at the same time developing understandable information/ messaging needed to combat the increasing hysteria fueled by the local and national activist groups.

Communication staff resources

In 2018, the NTMWD communications team consisted of a public relations officer (PIO), a public relations specialist and one administrative staff member. NTMWD also has two education staff primarily focused on communicating about water conservation and environmental education topics. The communications crisis around the annual chlorine conversion demonstrated the need to add another public relations specialist beginning in mid-2018.

Communication Channels

Facebook
Twitter
Topic specific Website pages
YouTube
Instagram
E-newsletter

Crisis Response Tools

Messaging. NTMWD highlighted the importance of the annual practice to maintain water quality. They made a personal connection, reminding consumers that their employees care about water safety because they also are customers who live in the area and drink the water. Communications staff bolstered communication materials to ensure technical concepts were understandable and relatable to consumers, and that they addressed the most frequent questions and offered tips for those who may be sensitive to the temporary change.

Partner organizations and third-party endorsements. NTMWD reached out to county health officials to offer tours, briefings and informational tools to ensure they had accurate information to share with their networks and constituents to raise awareness about water treatment and the use of chlorine in the process. They discussed the public concerns with the Texas Commission on Environmental Quality (TCEQ), which adjusted the information on its website to be more user-friendly for the public (previous information on chloramines was written for water utilities as the primary audience). NTMWD also convened its own panel of national, independent experts to speak to the media about the treatment process, correct misinformation and answer questions in advance of the town hall hosted by local and national activists.

Informational Tools. For the 2019 conversion, NTMWD developed many informational tools so customers received proactive information in a variety of formats that could link back to the utility website for more information.

- Topic-specific webpages at ntmwd.com housed all information resources and served as a resource to respond to social media inquiries
    - Videos featuring the executive director and employees
    - Videos featuring third-party expertise including a toxicologist to address health concerns
    - Easily accessible infographics and fact sheets to:
        - Explain the treatment process
        - Provide tips for those sensitive to chlorine
        - Offer guidance on how to get water independently tested and who to contact
        - Links to other experts – TCEQ, EPA, AWWA, CDC

Communicate with Elected Officials. In 2019, NTMWD built on existing relationships and partnerships with their customer cities to proactively prepare City Council, staff, city call centers and communicators in advance, arming them with information and messaging about the spring chlorine conversion. The intent was to have them better prepared to support the conversation with constituents and incorporate their own messaging and local information.

Targeted Community Outreach. NTMWD invited the local citizen group to a briefing and tour of the treatment plant and laboratory to have a dialogue, help allay fears and provide information.

Voluntary Additional Testing. NTMWD moved to voluntary monthly testing for Disinfection By-Products (DBPs) to demonstrate that they were listening to concerns, providing additional data on year-round water quality and demonstrating willingness to go above and beyond regulatory requirements. They also hired outside technical consultants to review their treatment and annual system maintenance processes. The consultant independently developed best practices for operating the regional and local systems that emphasized the importance of flushing local systems to maintain water quality.

Employee Ambassadors. NTMWD recruited a laboratory employee and local mom to participate in a video explaining the safety of the water. Talking points were provided to employees, who were encouraged to point customers to the website for answers instead of trying to answer questions themselves. NTMWD noted they would consider recruiting employee volunteers to serve as additional ambassadors, advocates and spokespeople in the future.

After-Action Review. The utility hosted after-action review meetings on the chlorine maintenance response in late 2018 in preparation for the next year and then again after the 2019 conversion. This included surveying their staff, city staff and city council to compare the 2019 response with what happened in 2018. This helped NTMWD understand what the cities thought was most effective and how NTMWD can adjust and improve future communications.

Outside public relations and communications expertise. NTMWD already had a crisis communications consultant on retainer to help with after-hours issues and media calls. The District also had a public relations firm under contract to support messaging,

website, social media, graphic design and video production. This firm helped provide risk communication expertise to assist in preparing and outlining a communications strategy and developing new tools for the 2019 chlorine conversion.

Recommendations and Lessons Learned

- Consider what can be done to go "above and beyond" mandated testing requirements. Take voluntary actions from an operations standpoint that can provide your public relations team with a good story to tell.
- Plan now before the crisis hits. Identify your informational resources ahead of time and build relationships with third party endorsers/experts to provide back-up during these incidents to help address the tough questions.
    - Understand that experts can speak to existing water quality standards and regulations but not to your specific water system.
    - Water system managers can speak to their water system but not to how the regulations and standards were developed and the science behind them.
- Research how other utilities are messaging and communicating on complex topics. Anticipate and address most common questions in advance.
- Keep calm. Avoid taking the bait on every false claim. Don't provide a platform for false claims to spread.
- Consider making a personal connection with your messaging. Remind the public that your employees are customers too, for example "Our employees live here, are your neighbors and drink the water." Or, "We drink the water and our friends and neighbors drink the water—it's personal."
- Review your information to ensure that terms and concepts are understandable and relatable for communicating to the public. NTWMD revised its talking points to refer to the chlorine maintenance as a "temporary change in disinfectant."
- Be proactive with your elected officials, stakeholders and customers on the front end to minimize requests to provide the utility response and plan of action at fear-fueled town halls and city council meetings.
- Engaging citizens directly can be positive depending on the situation (i.e. hosting your own town hall or open house to provide information on the issue).
- Do proactive media outreach to provide facts and resources in advance that may help control the message.
- Develop an internal communication plan to ensure employees are informed on the issue and have the contacts and resources they need to assist customers with questions.

What happened after the crisis?

In 2018, the biggest challenge for NTMWD was getting caught off guard by the explosion of community interest and media coverage of a treatment process that had been conducted without incident for more than a decade. In 2019, NTMWD implemented a successful proactive communication plan that significantly reduced community concerns with 60 percent of customer cities surveyed reporting less than a dozen calls, emails or social media mentions from residents.

NTMWD's proactive media outreach resulted in positive coverage that included their messaging about the need and importance of the annual chlorine treatment. They also built on existing relationships and partnerships with their wholesale customer cities to proactively prepare city councils, staff, city call centers and communicators in advance, arming them with information and messaging. City customers embraced the process

and escalated their own communications so much that NTMWD was able to scale back a planned social media campaign from three posts per week to just one per week.

Finally, NTMWD prepared in advance by recruiting stand-by academic expertise to help correct misinformation as needed. They also recruited a toxicologist with the expertise to address medical claims and had him develop a fact sheet and appear in a video that helped make his expertise more accessible and usable for their website and distribution on social media.

The local advocacy group still exists but has been somewhat mollified by the efforts of NTMWD and city water departments to conduct and provide the results of additional water quality tests. The national advocate continues to post about NTMWD, but with much less frequency and with minimal local media coverage.

Halifax Water (Nova Scotia)

Halifax Water is a municipal water, wastewater, and stormwater utility employing nearly 470 people. With more than 83,000 accounts, Halifax serves approximately 370,000 people in the Halifax region.

Interviewed: James Campbell, Communications and Public Relations Coordinator

The Communication Challenge

In late 2012, Halifax Water started receiving reports from customers of a musty smell and taste in the drinking water supplied by the Pockwock Water Supply Plant. Pockwock provides drinking water to approximately 200,000 residents. The cause was determined to be the presence of a bacteria called geosmin in the Pockwock Lake source water supply. Geosmin is common in water supplies around the world but had not previously been present in any of Halifax Water's source water supplies and none of Halifax Water's other water supplies were affected.

An unusually warm and dry summer followed by a wet fall provided an ideal environment for geosmin to take root. Geosmin causes taste and odor problems at concentrations as low as 5 ng/L (parts per trillion), though most of the population will only be able to detect it at concentrations above 10 ng/L.

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In 2012, the Pockwock Lake water source fluctuated between 10-15 nanograms/liter (ng/L). The occurrence of geosmin lessens with cooler temperatures and the issue died down toward the end of 2012 but reappeared in the Pockwock water supply in 2013. Geosmin levels continued to fluctuate in the water supply causing taste and odor issues through late 2016.

Treatment for the geosmin outbreak would have been costly for a situation that had never occurred before and possibly wouldn't be a concern again in the future. Halifax Water committed to having its water quality research team investigate options.

The geosmin issue was slow to emerge for Halifax Water and it did not initially receive many complaints from customers. While social media did not play much of a role in raising awareness of this issue, initial news media coverage sparked some customer concern. At the height of the issue, a small group of vocal customers were active on the issue, contacting local media, requesting additional treatment processes, attending public meetings and contacting the utility to complain.

Communication staff resources

Halifax Water has three staff members handling communication; a Communications and Public Relations Coordinator/PIO who handles media relations and two communication associates. At the time of the initial geosmin issue, the utility only had one communications staff member.

Communication channels

Facebook
Twitter
Website
Email distribution lists
Crisis Response

Messaging. Halifax Water used a consistent messaging platform based on the following concepts to reinforce the safety of its drinking water.

1. This was a first-time occurrence – no history of geosmin in Halifax Water treatment
2. Geosmin is not a health concern
3. This is an aesthetic issue only. We understand there are taste and odor issues, but the water is safe to drink.
4. We are looking into the cause and our options for remedying the issue.
5. Geosmin is common in other water supplies around the world and is not a health risk.

Partner organizations and third-party advocates. Halifax Water reached out to the local health officer with information for the medical community to help them explain the issue and reassure their patients that the drinking water was safe. The local health officer agreed to provide a third-party perspective for media interviews.

Develop Informational Tools.

- Social Media
  - Twitter – at the onset of the geosmin issue, Halifax Water was primarily using Twitter but has since added Facebook to its social media platforms
- Website
  - FAQs
  - Sampling results

Communicate with Elected Officials. Halifax Water reached out to local municipal officials to provide information on the issue and talking points to reassure constituents about the safety of the water and what mitigation was taking place to address the odor and taste issues.

Targeted Community Outreach. The utility developed an email list for particularly sensitive or interested customers to provide results of weekly sampling for geosmin.

Media Relations. Halifax Water has long-established relationships with the local media that it was able to leverage to get its message out. It reached out to provide information on the issue and talking points to reassure constituents about the safety of the water and what actions it was taking to address the smell and taste issues. It submitted a letter to the editor in the local paper, The Chronicle Herald, from its Director of Water Services to address concerns that had been highlighted in other letters, explaining the issue and the mitigation steps being taken. Halifax Water offered tours of its Pockwock water supply plant to explain what was being done to address the geosmin issue.

Customer Conversations. Halifax Water does annual customer surveys. Satisfaction with water quality remains high but in 2013, they started adding a question about customer willingness-to-pay for upgrades to the water system to address future potential occurrence of geosmin in the supply. They also tracked the number of calls and emails they received about the issue and added some customers to their email distribution list for updates.

Recommendations and Lessons Learned

- Would have liked more relatable, accessible language readily available to help explain a complicated issue like geosmin to customers. Halifax Water encountered some difficulty with interpreting the science of the issue so that it was easily digestible and reportable for local media.
- Get the message out quickly, in plain language and ensure customers remain confident in the quality and safety of their water and that the utility has their health and safety interests at heart.
- Providing frequently asked questions and email updates for interested customers was particularly effective in calming fears and keeping the public—especially those that were vocal about the issue—informed with accurate information.
- Using local health and elected officials as trusted resources for getting accurate third-party information to customers/citizens was effective.
- Since the geosmin issue, Halifax Water has added more graphic design capability to its communications team to help create more proactive and engaging social media-appropriate material around water, wastewater and stormwater related communications.

Where are we today?

The issue has died down since 2016 as cooler temperatures helped remedy the problem and remove the musty smell and taste issues. There has been no lasting effect on the utility or its reputation for providing high quality products and services. Halifax Water keeps updating the test results on its website but other communication on the topic has stopped. There have been no inquiries for more than a year.

City of Ann Arbor (Michigan)

The City of Ann Arbor supplies water to approximately 125,000 people. The Ann Arbor water supply is comprised of both surface and groundwater sources with 85 percent coming from the Huron River.

Interviewed:
Lisa Wondrash, Communications Director
Brian Steglitz, Water Treatment Plant Manager

The Communication Challenge

In 2017, Environmental Working Group (EWG) produced a report on per- and polyfluoroalkyl substances (PFAS) that included a map where test results had detected PFAS in drinking water supplies. Ann Arbor was one of the utilities identified in the report. Although the EPA had released a health advisory level for PFAS in 2016, information about PFAS was limited with no enforceable regulations in place to frame health impacts or guide mitigation efforts.

Ann Arbor began voluntarily working to reduce its PFAS levels by researching new filtration technologies and sampling test sites along the Huron River to try to identify the source of contamination. The Department of Environment, Great Lake and Energy (EGLE) ultimately identified a combination of industrial treatment processes and wastewater discharge as a primary source for PFAS levels in the Huron River. These processes were increasingly regulated, which helped to reduce levels of PFAS in the river, but an unexpected spike in PFAS levels in the fall of 2018 kept public concern high. At that time levels were four times the measurements taken in the spring of that year.

Elected officials elevated the issue and hosted public forums. Fears of contamination and rumored health impacts took root in the community and consumers expressed expectations that mitigating PFAS in Ann Arbor meant taking every precaution to eliminate it from the water supply. Ann Arbor knew it was not acceptable to respond that PFAS weren't a priority, even though other contaminants the utility was mitigating posed a higher risk.

Several factors complicated communications at the time. Media attention around PFAS moved faster than available science, and local media showed up at the water treatment plant the same day the EWG report was released. Putting terms like "parts per trillion" into understandable media sound bites that could help allay fears in the short window of time for communication was difficult. Other incidents like the Flint, Mich., water quality crisis and a nearby dioxane spill influenced public perception, keeping water quality top of mind and harming public trust in treatment processes. Communication on the issue was not entirely under the control of Ann Arbor staff with local, state and federal agencies all communicating about PFAS, providing notices and guidance without necessarily coordinating with the city. This exacerbated an already fraught situation, as did various health advisories issued at the same time warning against eating fish and ingesting river water. All of it sparked questions about recreation and health impacts. Ann Arbor staff were constantly reacting during this time, trying to respond to citizen questions while at the same time trying to develop the communication tools necessary to provide the credible information citizens needed to put mitigation efforts and health risks into context.

Communication staff resources

The communications team for Ann Arbor serves all city operations including the water utility. They have a communications director/PIO, a communications manager and

two communications specialists. The city's water treatment plant serves as the city's call center since they already operate 24/7. Treatment plant staff are trained to answer water quality questions and refer questions about other city services to appropriate departments.

Communication channels

Facebook
Twitter
Website
A2 City Hall (online discussion board)
NextDoor
Monthly Electronic City Newsletter
Emergency Alerts
WaterMatters newsletter

Crisis Response

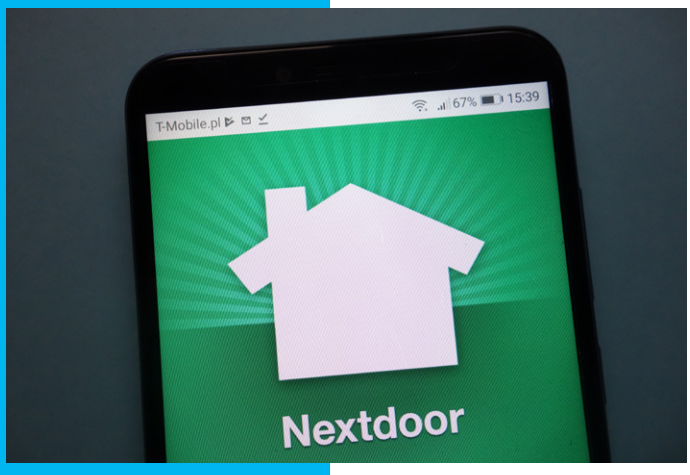
Messaging.

- Highlight the value of the services provided by the water treatment staff.
- Make an emotional connection with residents by highlighting the employees that manage their water supply.
- "Quality Water Matters" – a new tagline was designed to get citizens to start associating this concept with their water and Ann Arbor's core values.

Partner with organizations and third-party endorsers. Ann Arbor worked with Huron River Watershed Council and County Health Department to coordinate messaging and held joint events, town halls and meetings to provide information.

Develop Informational Tools. Included in the communications strategy were the following tools and tactics:

- Editorial Calendar. Developed an annual calendar to time PFAS stories to ensure information was current and residents were continually updated.
- Website. The city website had information about water, but this has since been expanded to include a stand-alone website devoted to water quality issues: www.qualitywatermatters.com
- Social media. Ann Arbor has used paid, targeted ads in the past, and found them to be successful. The city didn't see any real social media hysteria or conspiracy theories about PFAS on their social media channels except for NextDoor. Employees (including the water treatment plant manager) followed conversations in their NextDoor neighborhoods and kept the communications director up to date on what they were hearing. Employees were advised to respond with facts where possible and to direct questions back to the utility for response.
- Online newsletter. The city developed a new water-specific monthly newsletter and partnered with other organizations (county drain commissioner, county health department, Huron River Watershed Council) to include additional water information.



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- Community water champions. Highlight individuals, both city staff and community members, who believe in and/or are working to protect Ann Arbor water quality and drinking water resources. In the first issue of their new online newsletter, Quality Water Matters, they featured their Water Quality Manager.
- Community Television Network. This network has a channel devoted to city public meetings and has featured the Ann Arbor Water Treatment Plant Manager giving presentations to the City Council and other Boards as well as public service announcements related to water quality issues and other water-related information, like water rates.

Communicate with Elected Officials. Ann Arbor intentionally and proactively reached out to elected officials to provide briefings about PFAS. These efforts were aimed at pre-empting future requests to appear in response to advocacy campaigns and misinformation at public meetings.

Targeted Community Outreach. A calendar of "Water Pop-up Events" was developed. These aren't advertised events, city staff just "pop up" at existing events (farmers markets, library events, community festivals, etc.) to answer questions. They use a water drop costume to attract attention.

Media Relations. Staff worked to develop a proactive media relations plan. There is no local newspaper in Ann Arbor, so it is subject to information printed in statewide or larger city papers that can sometimes spark unexpected calls to Ann Arbor about water issues.

Voluntary Mitigation. Ann Arbor replaced the media in all its filters with a granular activated carbon product that is designed to effectively remove PFAS. It initiated voluntary testing along the Huron River to try and establish the source of PFAS contamination. It also launched a program to test river foam and provided results to EGLE, which resulted in fish, human and pet ingestion advisories. In the absence of EPA and state regulation, Ann Arbor voluntarily selected the most restrictive PFAS levels that exist in the U.S. as its water quality goals, and it is currently managing its system to achieve these levels.

Outside public relations and communications expertise. Communications on PFAS was becoming a full-time job for the communications director and water treatment plant manager so they hired external expertise to develop a proactive and coordinated communications strategy.

Recommendations and Lessons Learned

- Coordinate with key stakeholders/organizations. Work with them in private to determine where you agree and can collaborate, and establish where you disagree, so you are not doing that in public.
- Spend the money to communicate about the water system. Historically, utilities, including Ann Arbor, have mostly functioned in the background. Step out of the shadows and talk about the value of your water service. The city is planning to highlight its employees and community water champions in its new water newsletter to make an emotional connection to water in Ann Arbor. The core idea is to introduce citizens to the caretakers of their water system.

- Be transparent with data. Don't hold it back even if it doesn't tell a good story. Initially, Ann Arbor only made data public that was associated with a health advisory or guideline. It then received open records requests for all the data and was accused of hiding data. The city didn't want to release the additional data because without a health advisory, guideline or regulation there was no context for the information. Twenty of the compounds it is testing have no identified health metric associated with them.
- Be proactive with city council, media and the public. Release all results even if they are bad. Re-test and admit if you don't know why test results are high. Don't guess. You will build trust by doing this. It takes an all-hands-on deck strategy to communicate this way. You'll need a communications team and sometimes outside expertise to help.
- Develop communications that aren't solely online. Currently, all of Ann Arbor's informational tools are online, and it needs to find a way to reach consumers who aren't (e.g. seniors, students, low-income communities).
- Ann Arbor found that NextDoor is a good communication tool to catch and correct misinformation. It is a more direct method for answering questions than trying to repost on other social media channels to keep information at the top of newsfeeds.
- Determine and develop your brand. This is important, because utilities need their customers to be able to identify the level of services that they provide. In our case it is "Quality Water Matters." This could be about value, water quality, responsiveness to inquiries, etc. Once a brand is developed, customers need to be exposed to this brand through all interactions with the utility.
- Develop a relationship with your customers when there are not outstanding issues or challenges. If utilities wait until there is a quality of service issue or rate hike to communicate with customers, the relationship is being built in a defensive posture. Utilities need to proactively communicate their message and brand and as the relationship of trust is built over time, they will be able to weather the more difficult issues that arise.
- Learn how to communicate about what you don't know as well as what you do know. When dealing with emerging contaminants, utilities may not have all the answers. This is OK, and not an excuse not to communicate. Learning how to do this with customers is important and builds trust.

Where are we today?

In 2018, Ann Arbor started piloting a new filter media, Calgon F400 granulated active carbon, and since that date has been able to achieve non-detect levels of PFOS and PFOA. In 2018, the City Council authorized staff to replace the media in all its filters with this new product at a cost of $850,000. This work was completed in April 2019.

Statewide awareness and response remain high. The state has created a new department devoted entirely to dealing with PFAS contamination. The Governor mentioned the issue specifically in her 2019 State-of-the-State address. The state legislature is pushing for action or regulation on military properties that have been known to use the fire-fighting foam that leads to PFAS in water supplies.

During this time, city council elections resulted in the replacement of more than half of the existing city council with new members. New members remain concerned about water quality and have raised questions about alternative sources, which staff will need to investigate. In 2019, Ann Arbor began implementing a proactive communications plan intended to build customer and elected official understanding of the safety, value and importance of their local water service.

Aqua Pennsylvania

Aqua Pennsylvania is an Aqua America subsidiary serving more than 1.4 million residents in 32 counties across Pennsylvania.

Interviewed: Chuck Hertz, Director Water Quality, Aqua America

The Communication Challenge

In 2012, the EPA's third Unregulated Contaminant Monitoring Rule (UCMR – 3) was published requiring water utilities to begin testing for six different PFAS compounds. Utilities across Pennsylvania started formally testing for PFAS in 2013 and began to detect PFAS in their water sources, some with unexpectedly high levels shortly thereafter.

Pennsylvania Department of Environmental Protection (DEP) required immediate customer notification, attracting media attention, especially from local news outlets. While Aqua Pennsylvania had developed some risk communications materials related to claims of chromium contamination from an advocacy group testing nearby water sources, very little information was available at that time with respect to PFAS. As public concern began to swell, the communications team at Aqua Pennsylvania became increasingly more reactive with no capacity to do anything beyond responding to media requests.

As the issue gained traction, resident activists used social media to organize an advocacy group and started sending representatives to public meetings. They met with state and local legislators and the Governors' office, effectively raising the profile of the issue and recruiting supporters. Formal environmental advocacy groups and celebrity activists began to weigh in, providing public comment, initiating social media campaigns, hosting webinars and circulating petitions asking for utilities, including Aqua Pennsylvania, to install additional treatment and remove PFAS contamination.

In 2016, Aqua Pennsylvania began a voluntary testing effort, and when samples were submitted to more sensitive testing, PFAS was discovered in locations throughout its surface and groundwater supplies that had previously shown no detectable levels. Aqua Pennsylvania continued voluntary testing efforts to try and find the source of the problem. Ultimately, Aqua Pennsylvania spent so much on testing that it became more cost effective to purchase its own equipment. As the incidents of PFAS started to increase in their system and in response to public concern, Aqua Pennsylvania took voluntary steps to increase testing and install additional treatment technology at several groundwater wells as a preventative measure in areas where PFAS were detected. Even though test results showed levels below the health advisory levels, the utility chose to install additional treatment—granular activated carbon (GAC)—a million-dollar investment per well to address the issue and help ease public concern.

Public fear and concern over PFAS contamination reached its height between 2014 and 2016 and sparked a public response that included convening state and federal task forces and committees and the proposal of state legislation and associated regulation to address the issue. The issue remains in the public consciousness today as efforts are ongoing to bring the science of PFAS up-to-date and to regulate, mitigate and treat for PFAS in public and private water systems.

Communication staff resources

Aqua Pennsylvania has a communication group with staff responsible for working with the media. It also employs a technical services team that serves as a liaison for its customers—interpreting water quality data and science and answering customers' questions in a relatable, understandable way.

Communication channels

Facebook
Twitter
Website
Topic-specific external website – waterfacts.com

Crisis Response

Messaging. Aqua Pennsylvania highlighted proactive, voluntary efforts it was taking to address the issue and stressed its commitment to the health and safety of customers.

Partner organizations and third-party advocates. Aqua Pennsylvania had a pre-existing relationship with the EPA spokesperson and was able to leverage that for help to ensure lines of communication were open and Aqua Pennsylvania was kept in the loop as the issue evolved. It also reached out to local health departments to provide information for them to share with their clients and constituents.

Informational Tools. The utility developed PFAS-specific informational resources and created a standalone website entirely dedicated to PFAS information—waterfacts.com. The website includes testing data, FAQs and links to additional resources.

Communicate with Elected Officials. Aqua Pennsylvania intentionally and proactively reached out to elected officials about PFAS and invited them to briefings to ensure they understood the problem and the utility's response. Elected officials were provided with accurate messaging and information, so they could serve as trusted, third-party informational resources for their constituents.

Targeted Community Outreach. Aqua Pennsylvania sent representatives to public events hosted by communities and local elected officials to present and staff informational tables. EPA, in combination with its partners at the Navy (determined to be one of the responsible parties for PFAS contamination due to the past use of fire suppression foam), local health departments and DEP, held two outreach events to help get information out to the community about PFAS. Aqua Pennsylvania attended as support for these events.

Media Monitoring. Aqua Pennsylvania subscribed to a news clip service just for PFAS-related media stories. The service covers both traditional and social media and helps keep the utility informed about what information, and more importantly, misinformation, is being distributed about the compound and its presence in public water supplies.

Voluntary Mitigation. Because of growing public concern, Aqua Pennsylvania took voluntary proactive steps to both increase testing and install additional treatment technology at several groundwater wells in areas where PFAS had been found as a preventative measure.

Customer Conversations. Aqua America's communication team implemented customer satisfaction surveys and focus groups beginning in 2015 to find out what its customers were thinking about the PFAS issue. It intentionally focused on communities where PFAS were a concern and brought in its most vocal critics for focus groups. The utility modified its communication to be responsive to what it heard in focus groups and to more clearly articulate its response for managing PFAS in the water system.

Outside public relations and communications expertise. External public relations expertise was added to the existing Aqua Pennsylvania team to help with its response during the height of the PFAS situation.

Recommendations and Lessons Learned

- Identify reporters and develop relationships with the media in advance of incidents (during calmer times) – this goes a long way in a crisis.
- Communication professionals should pay attention to what's in the water—testing, monitoring, quality control, and what your utility does to make sure the water is safe. Keeping an eye out for potential issues can be helpful. Pay attention to what's being talked about in the local/national media. Pay attention to what's being talked about publicly and in your community.
- Provide resources for your customers to help bridge the gap in communication between water quality data and customer questions.
- Hire or identify communications staff that can handle media once the issue gains traction in the public domain.
- Intentionally and proactively reach out to elected officials. Invite them to your office/treatment plant to brief them. Ensure they understand the issue and are provided with the messaging and information to accurately respond to their constituent questions and concerns.
- Build relationships in advance with federal and state regulator offices (i.e. EPA, Agency for Toxic Substance and Disease Registry (ATSDR)/CDC, state health and environmental departments). Depending on your situation, it may be helpful to reach out to your contacts to ask for help with things like public meetings or town halls to provide information from trusted third-party sources. At a minimum, it is important to have open lines of communication to leverage during times of crisis.
- Corporate social responsibility, like voluntary testing and mitigation, is not an easy sell but you need to evaluate the investment against what will happen if you don't.
- Grin and bear it, learn as much as you can, be honest with customers, keep your spirits up, do the right thing, keep plugging away at it, focus on customer protection.

Where are we today?

The issue remains in the public consciousness today in many of Aqua Pennsylvania's service areas as ongoing efforts continue to bring the science of PFAS up to date and to regulate, mitigate and treat for PFAS in public and private water systems.

Aqua Pennsylvania continues to voluntarily monitor and test for PFAS, providing testing results on waterfacts.com, its dedicated PFAS information website. It has also developed a PFAS action plan that prioritizes the systems with the highest PFAS concentrations and will be evaluating PFAS concentrations in various water sources, adjusting or removing sources of supply as needed and making capital investments to reduce PFAS concentrations in treated drinking water.

Horsham Water and Sewer Authority (Pennsylvania)

Horsham Water and Sewer Authority's (HWSA) public water system supplies drinking water to approximately 7,800 residential, commercial and industrial customers using 14 deep water wells and purchased water from two adjacent water suppliers.

Interviewed: Mike Pickel, Director of Compliance and Regulatory Affairs

The Communication Challenge

HWSA has 14 active groundwater wells that provide the bulk of its supply. It supplements that supply with surface water purchased from two other sources. In 2012, the EPA's third Unregulated Contaminant Monitoring Rule (UCMR – 3) was published requiring water utilities to begin testing for six different PFAS compounds, among other potential contaminants. HWSA started formally testing for PFAS in 2013. In 2014, two of HWSA's groundwater wells were found to have exceeded the EPA provisional health advisory level (PHAL) of 200 ppt for Perfluorooctanesulfonic acid (PFOS). It was later determined that the cause of the contamination was the use of fire foam for training exercises at the nearby Willow Grove Naval Air Station Joint Reserve Base (NASRB).

In consultation with EPA and the Pennsylvania Department of Environmental Protection (PADEP), HWSA took the precautionary approach of shutting down the two contaminated wells immediately and providing public notice to all customers. With only 24 hours to provide public notice about the contaminated wells, HWSA struggled to provide customers with adequate information given the lack of science available on PFAS as a contaminant. HWSA found there was little information available to provide to the public about impacts, how to protect themselves and potential mitigation plans.

Public concern surged in May 2016 when EPA issued a new more stringent Health Advisory (HA) for PFAS compounds of 70 ppt for the combined concentrations of PFOS and Perfluorooctanoic acid (PFOA). This new HA resulted in three more wells being shut down and another round of public notice to all customers. Given the understanding that PFAS could bioaccumulate in the body over time and lead to adverse human health effects, the township adopted the position that they wanted the drinking water to achieve "non-detect" levels to help mitigate impacts of past exposures. In 2016, HWSA collaborated with the town to develop voluntary short- and long-term mitigation plans that included ongoing testing, alternative water supplies and treatment upgrades to eliminate PFAS from the water supply.

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As the issue gained traction, resident activists used social media, primarily Facebook, to organize multiple advocacy groups and started sending representatives to public meetings to address the issue. They met with state and local legislators and the Governor's office, to effectively raise the profile of the issue and recruit supporters. Formal environmental advocacy groups and celebrity activists began to weigh in, providing public comment, initiating social media campaigns, hosting webinars and circulating petitions asking for utilities to install additional treatment. In response, the U.S. Navy hosted an open house in 2014 to update the community and provide what information was available on PFAS at the time. As the situation continued to evolve, EPA got involved, providing additional research and information and collaborating

with the Navy to host additional open house events in 2015 and 2016 to update the community about testing, mitigation and restoration efforts and ongoing studies of health impacts.

By 2017, HWSA had achieved its goal of bringing the drinking water supply PFAS levels to at, or near, non-detect levels. However, public fear and concern over PFAS contamination continues and has sparked a response that includes convening state and federal task forces and committees to address the issue as well as the adoption of associated legislation and regulation.

Communication staff resources

HWSA has no communication staff. Horsham Township employs an external consultant to help with communication.

Communication channels

Website

Crisis Response

Messaging. HWSA highlighted proactive, voluntary efforts it took to address the issue locally.

Partner organizations and third-party advocates. HWSA looked to EPA and the Navy to assist with communicating about PFAS in its community, leveraging previously-established relationships built with the state and federal EPA offices. The Centers for Disease Control (CDC) and the Pennsylvania Department of Health were also helpful in addressing health concerns.

Develop Informational Tools. HWSA developed informational tools so that customers could receive proactive information in a variety of formats and be referred back to the utility website for more information. The Navy, EPA and Horsham have produced a variety of informational tools for residents since PFAS were discovered in the area in 2014.

- PFAS fact sheets (Navy and EPA)
- Open House materials (Navy and EPA)
- FAQs (Horsham)
- Informational mailing/notices/letters to customers (Horsham)
- Bill inserts (Horsham)
- Topic-specific webpage at Horshamwater-sewer.com to house all information

Communicate with Elected Officials. HWSA partnered with elected officials in the area to hold town halls during this time, specifically designed to discuss water quality. Numerous state and federal elected officials have conducted roundtable meetings or workshops in Horsham on the subject as they press for more actions from the regulatory agencies and/or for legislation to address PFAS contamination. Horsham hosted one of EPA's PFAS Community Engagement Events in July 2018 as EPA was developing its national PFAS Action Plan.

HWSA provides updates to Horsham City Council every other month to keep them in the loop on implementation of the short- and long-term action plans. In 2018, the Governor created a PFAS Action Team to help address the issue.

Targeted Community Outreach. The Navy and EPA hosted open houses in 2014, 2015 and 2016 to keep residents informed about PFAS and progress in testing, mitigating and preventing adverse health impacts. They used an open house format with multiple display stations for people to visit and talk with staff about specific PFAS topics (health impacts, regulatory requirements, mitigation plans, etc.). In 2018, EPA hosted a full-day workshop on PFAS at several locations around the country, including Horsham. During this time, Horsham collaborated with Horsham Township to supplement the federal open houses by hosting additional local public meeting sessions for their community.

Media Relations. HWSA has developed a good relationship with a local news reporter and works with him to provide information on the issue. The same reporter has been covering the issue locally since 2014 and continues to provide balanced reporting on the issue.

Voluntary Mitigation. In collaboration with Horsham Township, HWSA developed a short- and long-term plan for mitigating PFAS that included voluntary proactive steps to fund and install additional treatment technology to several groundwater wells – granular activated carbon (GAC) – in areas where PFAS had been found as a preventative measure. It also buys replacement water from neighboring utilities.

The Navy has funded the installation of treatment on the five wells that exceed the PFAS HA of 70 ppt, but HWSA is investing millions in additional treatment processes on another five wells and an interconnect that have detectable levels of PFAS lower than 70 ppt as part of its short- and long-term mitigation plans. Through the efforts of local elected officials, HWSA has received a grant from the state to help pay for these capital costs, but the operating costs of the granular activated carbon (GAC) filters on these groundwater wells will be borne by HWSA customers.

Recommendations and Lessons Learned

- Be as prepared and proactive as possible.
- Build good relationships with respected media/reporters in advance of the crisis. Leverage those relationships during the crisis to ensure balanced, factual reporting on the issue.
- Build relationships with staff at state and federal regulatory agencies who will be implementing permitting requirements. There can be a disconnect and lack of urgency at lower levels resulting in long wait times for permitting and issue response.
- It may be helpful to reach out to your public health contacts to ask for help with things like public meetings or town halls to provide information. At a minimum, it is important to have open lines of communication with these contacts during times of crisis.

Where are we today?

HWSA has achieved a non-detect level for PFAS in its system. It began transitioning to its long-term monitoring plan in 2019. The Governor's PFAS Action Team remains active. The Navy and the Air National Guard have spent millions of dollars on testing, restoration and assistance to utilities to help filter and treat water.

As is the case for Aqua in Pennsylvania, PFAS remains in the public consciousness today as communities struggle to stay ahead of the issue. Federal and state agencies continue to work to understand the science of PFAS so they can provide guidance or regulation that utilities can use to mitigate and/or treat for PFAS in public and private water systems.

HWSA participates in or collaborates with federal, state and local advisory groups that continue to work to address the issue. HWSA has also been active in advocating for ongoing health studies at federal, state and local agencies.

Mount Pleasant Waterworks (South Carolina)

Mount Pleasant Waterworks (MPW) provides water and wastewater services to 40,000 customer accounts in Charleston's second largest suburb, Mount Pleasant, S.C. MPW gets its drinking water from the Middendorf Aquifer and from surface water supplies purchased from a wholesale water supplier, the Charleston Water System.

Interviewed: Clay Duffie, General Manager
Nicole Bates, Customer Services Manager

The Communication Challenge

In 2017, local mothers using a closed Facebook page began talking about a perceived increase in children with brain cancer in the area and started trying to pinpoint a cause. The local media was notified and began covering the issue. During one local media report, residents were asked a question about whether the cancer incidence could have been caused by the water. This discussion sparked fear in residents about the potential of contaminated water.

A coalition of mothers from the Facebook group submitted a request to the CDC and the South Carolina Department of Health and Environmental Control (DHEC), to have the area designated as a cancer cluster. Both agencies declined, citing that there wasn't enough research or evidence to do so at the time. Residents turned to testing their tap water with home test kits, calling MPW, and sharing their results on Facebook. They claimed results showed the presence of herbicides in the water. Media coverage increased as a result, national media outlets picked up the story, and the issue began to attract the attention of celebrity water quality activists.

Residents started calling the DHEC offices. DHEC staff notified MPW that community concern on the issue appeared to be increasing despite MPW announcements declaring the water safe. MPW initiated its crisis communications plan. This included daily staff meetings and conference calls with Charleston Water System and state health officials to assess the situation and coordinate next steps. MPW outlined a communications strategy that included social media, email notifications, public meetings and media interviews.

Community concern remained high and social media exploded with speculation about the safety of the water. MPW called a press conference to reassure customers that the water was safe and announced a public meeting in partnership with the Charleston Water System to talk with concerned residents. Twenty-four out of the more than 85,000 residents in Mt. Pleasant attended the meeting. While the issue appeared to be a high priority for this small subset of customers, other customers across the service area began to have questions as social media elevated the issue and caught the attention of the media and celebrity activists.

MPW, Charleston Water System and DHEC initiated a voluntary sampling program that included independent sampling from all three agencies to cross-check and verify results. Samples were taken at the homes of residents and at source water supplies. The sampling program was conducted within a week and followed by another public meeting to present the results. No samples found evidence of herbicide contamination in any of the three sampling protocols. However, the situation was exacerbated when a disgruntled customer claimed tests of his water by an independent lab showed the

chemical compound known as GenX, a culprit in the contamination of the water source in the nearby Cape Fear community. After some investigation with the testing company, MPW was able to negate these results as well.

It took 38 days and more than $100,000 in investment for MPW to quell water quality concerns to a level where the issue finally began to lose steam and operations began to return to normal.

Communication staff resources

MPW employs a communications manager and a communications specialist. However, as part of its crisis planning efforts, it utilize an incident command team that assigns additional staff to communication support roles during a crisis.

Communication channels

Facebook
Twitter
Nextdoor
Website
E-newsletter

Crisis Response

Messaging. MPW intentionally took control of the messages it was putting out, coordinating talking points for partner organizations and employees and remaining consistent across all communication channels.

MPW continues to use consistent water quality and safety messaging in all communications it puts out to maintain the customer knowledge base it built during the 2017 water quality concern.

MPW would like to work with EPA to talk about water and water quality differently moving forward. An example is to change terms like “contaminants” to more descriptive terms like “naturally occurring” or “man-made” to help customers understand the context for compounds found in their drinking water and make water quality reports less technical.

Crisis Communications Plan. MPW started developing crisis communications plans after Hurricane Hugo in 1989. Since that time, it has kept its plan up to date and ready to go in the event of future emergencies. It modeled its plan off the AWWA crisis communications template and recommendations from the National Incident Management System (NIMS). Its incident command team convenes about once per year, usually to deal with a weather-related emergency. The team also meets periodically to run table top exercises on various topics including drought. The table top exercises are scenario-based, and the team goes through the operational and communication steps they would take as if the situation were happening. These practice runs have proven to be very valuable in preparing for times of real crisis.

Partner organizations and third-party advocates. MPW worked with DHEC, Charleston Water and other local regulators to coordinate messaging and response.

Develop Informational Tools.

- Email Updates. MPW has 40,000 customer accounts and nearly 30,000 emails corresponding to those accounts. It established a daily email notification process to keep customers updated on sampling results and where to go for more information throughout the incident.

- Improved water quality report. MPW has made its report easier to understand using a booklet format that provides visuals and non-technical language to help customers understand their water quality. It is in the process of developing a companion piece for its wastewater system that talks about the environment.

Social media response. MPW made an intentional decision not to engage on community or activist-led social media platforms that were fueling contamination fears. Instead, it blasted consistent and frequent updates out via its own channels to establish itself as the central and most comprehensive information source.

While MPW couldn't see conversations happening on the local "mom" Facebook pages, several employees and customer advocates were members and able to correct misinformation, provide MPW messaging as part of independent, third-party responses and direct members to MPW resources for more information.

At the time, Nextdoor was not a popular tool in the area but it has since grown and MPW uses this channel to communicate now as well.

Targeted Community Outreach. MPW hosted two public meetings using a public meeting/presentation-style format. The first was designed to listen to concerns, provide information and outline the response, including the sampling program. The second meeting was held to share results.

Prior to the second meeting, MPW leadership ran a practice meeting with staff to get their feedback and suggestions on the planned response, especially from customer service staff who were hearing from customers on the front lines. MPW credits much of the success of the second meeting to the practice run that helped it tailor its message. Additionally, at the second meeting, MPW set up a table to provide all water quality information available. This information had always been available, but MPW made a proactive effort to consolidate it and provide copies at the meeting to be as open and transparent as possible.

The contamination incident in 2017 prompted DHEC to create a Safe Drinking Water Advisory Council. MPW participates on the Council and one of the ideas that came from these discussions was to host a Citizens Academy for water. MPW hosted its first Academy in 2018 – it had 300-400 applicants and selected 35 participants. It held six, two-hour meetings and brought in different staff to make presentations about the water system.

Voluntary Mitigation. Initiated a voluntary sampling program that included independent sampling of homes and water sources by MPW, Charleston Water System and DHEC. Put all schools in the service area on a routine sampling plan to ensure water provided to schools was always safe to drink.

Employee Communication. MPW convened an all-staff meeting to check in on employee morale, reassure and update them on the situation. It encouraged employees to "show a presence" in the community, confident in the fact that MPW was doing the right thing. It provided talking points and scripts so that employees could help respond to customer concerns and direct them to additional information and resources.

Employee response to internal communication efforts was so positive that, at the second public meeting, more employees voluntarily showed up to stand in support of the utility than concerned customers. MPW employees showed they cared and put a face on the utility, reinforcing the message that employees were residents and customers of MPW.

After Action Review. Hosted a de-brief after the event for staff to discuss lessons learned and to improve MPW's crisis communications planning for future emergencies.

Customer conversations. MPW conducts customer surveys. In the most recent survey MPW received a 91% satisfaction rating with customers. It is confident that its response to the 2017 incident played a large part in this and doesn't expect water quality issues to re-emerge any time soon.

Media. Had established relationships with reporters in advance of the crisis and were able to work with them to provide balanced coverage. The Charleston paper, The Post and Courier, printed an editorial supporting the MPW response to the contamination concerns. MPW credits positive coverage with helping to calm fears in the service area.

Recommendations and Lessons Learned

MPW has always been committed to water quality but has learned the importance of being proactive about talking about its efforts.

Get information out ASAP and repeat your messaging often and through all communication channels (news releases, social media, website, etc.)

Build relationships with reporters before a crisis occurs.

You can't prevent an emergency, but you will be judged on how you respond and communicate when it happens. Your response and resulting communication are the only thing you can control.

MPW was surprised by how quickly public sentiment turned to the negative. It hadn't done a lot of proactive engagement prior to the incident but customers didn't have much cause for concern and weren't very engaged. After the incident, MPW set out to actively engage and inform customers to maintain the relationships it built during the crisis.

Where are we today?

MPW closed this issue out after 38 days (July – August 2017) by issuing a press release concluding its response efforts. The issue had largely died down but MPW felt it was important to provide that closure to its customers. The issue has not re-emerged since and attention has shifted to other water issues that need to be communicated.

Appendix B: Topics of Concern Quick Response Sheets

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Quick Response Sheet

TOPIC: Affordability

Core Messages

- Providing our community with safe, reliable and affordable water services is our highest priority.
- We make every effort to balance affordability with the need to protect water quality and public health by maintaining and investing in our infrastructure.
- Rapidly changing technology, aging infrastructure, new regulations and a changing climate have increased the cost to provide water and sewer service.
- We have assistance programs available to help customers pay for service. Customers needing assistance can visit our website or call our customer care center for more information about how we can help.

Why have costs gone up significantly?

- Much of our infrastructure (pipes, pump stations and treatment plants) is old and in need of repair, replacement and expansion.
- Climate change is causing more frequent and severe weather events requiring crisis response and investment to build a more resilient system.
- Evolving regulatory requirements frequently require the addition of specialized treatment and equipment processes.

How much have costs to utilities increased?

- Over the last decade, water bills have increased consistently, outpacing the increase in the consumer price index (CPI).
- Between 1998 and 2018, monthly water bills for an average customer (using 7,480 gallons) have gone up almost 150% with monthly wastewater bills increasing more than 185%. The CPI increase was only 53% during this time.
- The costs identified above have forced water and wastewater utilities to raise rates higher and more frequently, leaving many customers struggling to pay their bill and utilities wrestling with their own long-term financial sustainability.

How can people in our community get assistance?

- We work with our customers to make special payment arrangements, such as leveling bills into equal monthly payments, and we provide special assistance and care for senior citizens.
- Whether our customers have overdue water/wastewater bills, are at risk of being disconnected or struggle to pay on time, we encourage them to contact us for help.
- If our customers need assistance, they can visit our website or call our customer care center for more information about how we can help.

What are utilities around the country doing to support customers and provide assistance?

Common programs that utilities use to address affordability concerns include:

- Customized affordability programs developed for the utility's specific situation and customer base
- Conservation assistance including water audits for high use customers, fixes to fixtures and leaks, or loans to assist with repairs

- Senior citizen discounts for customers who are within a specified income range
- Payment agreements to avoid shutoffs for customers with overdue account balances
- Matching grants to low-income customers to lower debt and reduce ongoing monthly bills
- Emergency assistance payments to provide one-time assistance in times of financial emergency
- Debt forgiveness of all or a portion of past debt based on good payment history
- Affordability-friendly rate structures that build in variable charges to help customers reduce their bill by conserving water
- Collaborate with local community service programs that may cover other areas (i.e. energy, housing)

Common ways that utilities operate as efficiently as possible to be financially responsible may include optimizing expenditures through operating efficiencies, implementing water conservation and resource management best practices, and prudently managing capital, operating, and financing costs.

Links to Additional Resources:

- EPA
- AWWA
- DrinkTap.org

Quick Response Sheet

TOPIC: Fluoride

Core Messages

- Protecting community health is our highest priority.
- For more than half a century, the U.S. Public Health Service and the American Dental Association have strongly recommended adding fluoride to drinking water to help prevent tooth decay.
- Additional information about fluoride and drinking water can be found on our website.

Why is fluoride in drinking water?

- Fluoride is a naturally occurring compound in our source water. It enters the water when fluoride-rich minerals in soils and rock dissolve.
- Fluoride is added to drinking water by most water utilities in the United States because of its health benefits.

Why do drinking water agencies sometimes add or remove fluoride during treatment?

- Water fluoridation is the process of adjusting the amount of naturally-occurring fluoride found in water to achieve optimal prevention of tooth decay.
- The fluoridation of drinking water is recommended by the American Dental Association, the American Academy of Pediatrics, the U.S. Public Health Service, the World Health Organization and the Centers for Disease Control.

Fluoride and dental health, is it really a need today?

- Studies by the U.S. Public Health Service and others have established the cause-effect relationship between fluoridation and the prevention of tooth decay.
- Studies show that community water fluoridation is the most cost-effective method of delivering fluoride, reducing tooth decay in children and adults by 25 percent.
- Since 1950, the American Dental Association (ADA) has strenuously endorsed the optimal fluoridation of community water supplies as a safe and effective public health measure for the prevention of tooth decay.
- The ADA's policy on fluoridation is based on its continuing evaluation of the scientific research on the safety and effectiveness of fluoride. The ADA continues to reaffirm its support for water fluoridation and has strongly urged that its benefits be extended to communities served by public water systems.
- The Centers for Disease Control (CDC) have established targets for the fluoride concentration in drinking water and endorse the use of supplemental fluoride in drinking water.
- Today, fluoridation is the single most effective public health measure to prevent tooth decay and improve oral health over a lifetime.

What about adverse health effects from fluoride? Should I be worried?

- Extremely high levels of fluoride in drinking water, significantly above the concentrations recommended by the U.S. Public Health Service for dental health, are associated with mottled teeth discoloration.

- Health researchers are examining concerns that high levels of fluoride could contribute to cancer. However, no peer reviewed research to date has found any correlation or causation between recommended concentrations of fluoride in drinking water and cancer.
- In 2015, the U.S. Public Health Service updated its recommendation for fluoride in drinking water and set the recommended concentration to 0.7 milligrams per liter.

How do you make sure that fluoride in our community water system is at safe concentrations?

- Delivering safe water is our mission.
- Fluoride is a naturally occurring substance in our source water.
- We only supplement fluoride at our treatment plants when concentrations fall below the level recommended by the U.S. Public Health Service, which is 0.7 milligrams per liter. A milligram per liter is equivalent to one part per million, which is one drop in 55 gallons of water.
- We regularly test our water sources to ensure our water quality meets or exceeds all regulations and guidelines. To learn more about your water quality please visit our website to review our annual water quality report.

Where can you go for more information?

- To learn more about your water quality please visit our website to review our annual water quality report.
- EPA
- CDC
- DrinkTap.org

Quick Response Sheet

TOPIC: Lead

Core Messages

- We are our community's primary advocate for safe drinking water and we want you to know that there is no lead in the drinking water that we provide to your home.
- Lead can get into your drinking water as it moves through your household plumbing or service lines (the pipes that connect your home's plumbing to the water main in the street) that contain lead.
- Protecting public health from lead in drinking water is a complex problem that we want you to understand.
- Additional information about lead and drinking water can be found on our website.

How does lead get in drinking water?

- Lead does not naturally occur in drinking water.
- Lead can enter drinking water when plumbing materials and fixtures that contain lead corrode.
- Lead can sometimes be found in the pipes that connect the home to the water main, also known as service lines.
- Among homes without lead service lines, the most common problem is with brass or chrome-plated brass faucets and plumbing with lead solder.
- Lead pipes are more likely to be found in cities and homes built before 1986.

What are the human health concerns?

- The EPA has determined that lead can cause health problems if it accumulates in a person's body over time.
- Developing fetuses, infants and young children are especially vulnerable, because the physical and behavioral impacts from lead occur at lower exposure levels in children than in adults.
- Lead is also harmful to adults and can lead to cardiovascular issues, decreased kidney function and reproductive problems.

What is being done at a national level to protect human health?

- The EPA regulates lead through the Lead and Copper Rule.
- The Lead and Copper Rule requires water utilities to control the corrosivity (dissolving or wearing away of metal caused by a chemical reaction between water and plumbing) of the water they provide. The regulation also requires utilities to collect samples from sites that are likely to have plumbing materials that contain lead.
- If more than 10 percent of water samples exceed 15 parts per billion, water utilities are required to adjust their treatment for corrosion control, educate the public about lead and actions consumers can take to reduce exposure and replace lead service lines.
- 15 parts per billion is not a maximum contaminant level, but rather an action level, meaning it's a point at which a utility must act if reached.

What are you doing to protect our community from lead?

- Delivering safe water is our mission.

- We are following the EPA's Lead and Copper Rule. We regularly test our water sources to ensure our water quality meets or exceeds all EPA rules and regulations.
- Protecting our community from lead is a responsibility we share with you. We've provided information for reducing your risk of exposure to lead through drinking water on our website.

Where can you go for more information?

- To learn more about your water quality please visit our website to review our annual water quality report.
- EPA
- CDC
- AWWA
- DrinkTap.org

Quick Response Sheet

TOPIC: Chloramines

Core Messages

- Protecting community health is our highest priority.
- Disinfection is a necessary part of the water treatment process to kill bacteria, viruses and other potentially harmful organisms.
- Chloramine is commonly used as a disinfectant to protect treated drinking water once it leaves the treatment plant. This ensures it remains safe to drink as it moves through the system to your tap.

What are chloramines?

- Chloramines are compounds created when ammonia is added to chlorine.

Why do we add them to drinking water?

- Chloramines are an effective disinfectant for drinking water.
- After a disinfectant is added during the treatment process, known as a Primary Disinfectant, to kill bacteria, viruses and other potentially harmful organisms, a Secondary Disinfectant is added as the treated water leaves the plant to maintain water quality as it moves through pipes to your home.

Are chloramines a new type of disinfectant?

- Chloramines have been used for water treatment since the 1930s. Today more than one in five Americans have drinking water treated with chloramines.
- Today, many water utilities are switching from chlorine to chloramines for secondary disinfection because chloramines produce fewer disinfection byproducts and help utilities meet stricter EPA drinking water regulations.

Are there human health concerns?

- Chloramines, like all common chemical disinfectants, including chlorine, react with naturally occurring compounds in the water and create byproducts.
- Research indicates that certain byproducts from chloramines *have the potential* to be harmful to human health at some levels, increasing the risk for some types of cancer and the incidence of miscarriage.
- The research assessing the risk of disinfection byproducts to human health is not clear and is sometimes contradictory.

What is being done at a national level to protect human health?

- EPA regulates the use of chloramines in drinking water and water utilities are required to meet strict health standards.
- EPA has set a maximum contaminant level (MCLs) for disinfection byproducts that can be linked to adverse health impacts and continues to research the health implications of all disinfection byproducts.

What are you doing to protect our community from chloramines?

- Delivering safe water is our mission.
- We are following EPA regulatory guidelines for the use of chloramines.
- We regularly test our water sources to ensure our water quality meets or exceeds all EPA regulations and guidelines.

- We share our testing results in an open and transparent manner with our regulators and our community.
- We follow new information developed by research and health agencies on chloramines, and other water quality issues, closely.
- If you would like to use a home water filter to help reduce the possibility of having disinfection byproducts from chloramines in your tap, be sure you get one that is independently certified to address the concern at hand and is properly maintained.

Where can you go for more information?

- To learn more about your water quality please visit our website to review our annual water quality report.
- If you have additional questions about your water quality, please contact us.
- EPA
- CDC
- DrinkTap.org

Quick Response Sheet

TOPIC: General Water Quality – Drinking Water

Core Messages

- As water quality experts, we are deeply concerned about community water quality, and we show it in our actions.
    - Share one or two recent water quality improvement stories.
    - Take a video or picture of your construction crews and let them tell the community what they do to protect water quality.
- We are dedicated to ensuring our community water meets or exceeds all federal and state requirements by testing thousands of water samples every year.
- We share our water quality test results in an open and transparent manner as part of our annual consumer confidence report (CCR), also known as our annual water quality report.
- Please visit our website to review and learn more about how we deliver safe, high quality drinking water to you every day.

Do I need a water filter?

- The water we deliver to your home meets all federal and state standards for drinking water and is safe to drink
- Safe Drinking Water Act standards are set to ensure that your tap water is safe.
- If you think your service line or plumbing could contain lead you may want to consider a filter. You can have your water tested at your local health department.
- If you would like to use a home water filter, be sure to get one that is independently certified to address the concern at hand.
- Follow the manufacturer's instructions for scheduled maintenance of your home treatment device.
- Maintaining your device properly is important because an inadequately maintained filter can increase your exposure to water quality contaminants.

Should I drink bottled water?

- It isn't necessary to buy bottled water for health reasons. The water we deliver to your home meets all state and federal standards.
- The U.S. Food and Drug Administration requires bottled water quality standards to be equal to those of the EPA for tap water, but the quality of the finished product is not monitored by the government and therefore not guaranteed over the shelf life of the bottle.
- Some of the largest bottled water distributors use municipal water as their source, so why pay more?

What are you doing to protect the safety of our community water supply?

- Water utilities in the United States are required to monitor for more than 100 contaminants on a regular basis. We regularly test our water sources to ensure our water quality meets or exceeds all EPA regulations and guidelines.
- We closely follow new information, health advisories and regulatory changes developed by research and health agencies on all emerging contaminates.

Where can you go for more information?

- To learn more about your water quality please visit our website to review our annual water quality report.
- EPA
- CDC
- DrinkTap.org

Quick Response Sheet

TOPIC: *Legionella*

Core Messages

- *Legionella* is bacteria that can grow in household or building hot water heaters, storage tanks, pipes, hot tubs and cooling towers when equipment is not maintained properly.
- *Legionella* is not in the drinking water supplied by your utility.
- If you suspect *Legionella* contamination or would like more information about the risk of *Legionella*, contact your local health department.
- If you live, work and play in well maintained and vented areas you are not likely to be exposed to *Legionella*.

What is *Legionella*?

- *Legionella* is bacteria found throughout the world in aquatic and moist environments like lakes, rivers, ground water and soil.
- *Legionella* can also grow in household or building water systems such as hot water heaters, storage tanks and pipes, cooling towers, decorative fountains or hot tubs.

Is *Legionella* dangerous to me or my family?

- Most healthy people do not become infected with *Legionella* even after exposure.
- People at higher risk of getting sick are typically 50 years or older, current or former smokers, have a chronic lung disease (like chronic obstructive pulmonary disease or emphysema), or a weakened immune system from diseases like cancer, diabetes or kidney failure.
- People are exposed to *Legionella* when they inhale water droplets containing the bacteria. For example, in steaming hot tub rooms that are not well maintained.

What happens if I get sick with *Legionella*?

- Legionellosis is a respiratory disease caused by *Legionella* bacteria.
- The *Legionella* bacteria infects the lungs and can cause a severe pneumonia called Legionnaires' disease. The bacteria can also cause a less serious infection that seems like a mild case of the flu called Pontiac fever.

What is being done to ensure no one gets sick?

- EPA requires public water systems to filter and disinfect surface water sources to prevent the risk of bacterial contamination.
- EPA has established a Maximum Contaminant Level Goal (MCLG) of zero *Legionella* for drinking water. An MCLG is a guideline based on an evaluation of possible health risks.
- The Centers for Disease Control provide guidance and resources for the prevention, monitoring and investigation of *Legionella* outbreaks.
- State and local health departments investigate individual cases or outbreaks of *Legionella* in their state.

What are you doing to protect our drinking water from *Legionella*?

- Delivering safe water is our mission.
- We regularly test our water sources to ensure our water quality meets or exceeds all EPA regulations and guidelines.

- *Legionella* is not typically found in treated drinking water, but grows in the pipes of homes and buildings when conditions are just right.
- We share with you the responsibility of protecting your family from *Legionella*, so we offer at our website actions you can take in your home or business to minimize the growth of *Legionella* in your pipes.
- We closely follow new information developed by research and health agencies on *Legionella* and other water quality issues.

Where can you go for more information?

- To learn more about your water quality please visit our website to review our annual water quality report.
- If you are concerned about a potential *Legionella* growth in your home or building, please contact your local health department.
- EPA
- CDC

Quick Response Sheet

TOPIC: Cyanotoxins

Core Messages

- Protecting our lakes, rivers and streams from pollution is a key priority for our utility and community.
- Our drinking water comes from surface waters that can grow harmful algae. We are dedicated to ensuring your water is always safe from harmful algae blooms.
- Cyanobacteria (SIGH-an-o-bac-ter-ia) can cause unpleasant tastes and odors in water and in some cases can produce potentially harmful blooms that produce cyanotoxins. Although not really an algae, cyanobacteria looks and grows like algae.
- To protect community health, we are monitoring for cyanobacteria and cyanotoxins in our system, using the EPA Health Advisories and regular testing as our guide.
- Additional information about cyanotoxins and drinking water can be found on our website.

What are cyanobacteria and cyanotoxins?

- Cyanobacteria, sometimes referred to as blue-green algae, are found naturally in lakes, rivers, ponds and other surface waters.
- Cyanobacteria that grow rapidly and excessively in lakes, reservoirs and other surface waters can produce toxic "blooms."
- Cyanobacteria can cause unpleasant tastes and odors in water even after it is cleaned at a treatment plant, and in some cases, cyanobacteria can produce potentially harmful cyanotoxins.
- Cyanobacteria blooms are often associated with excess nutrient runoff, which happens when fertilizer enters a water source through a storm drain, although there are other factors that affect growth such as warm water temperatures.

Are cyanotoxins dangerous to me or my family if they are in drinking water?

- Cyanotoxins, released during a cyanobacteria bloom, can be bad for your health, but until we tell you otherwise, your drinking water doesn't exceed Health Advisory levels, and if there ever is any concern you will be notified.
- We monitor and test our drinking water sources to ensure cyanotoxins are removed before or during treatment to ensure the water delivered to you meets all standards.
- Depending on the type and amount of cyanotoxins in the water, health impacts could include upset stomach, vomiting, diarrhea or, if large amounts are consumed for an extended period, damage to the liver and kidneys.
- According to EPA, children under six may be at higher risk than the general population from at least two cyanotoxins: microcystins and cylindrospermopsin.
- EPA also advises that certain populations may be more susceptible than the general population to the health effects of these cyanotoxins, including nursing mothers and pregnant women, the elderly, and immune-compromised individuals or those receiving dialysis treatment.

Are cyanotoxins dangerous to me or my family when engaging in activities on the water?

- Swimming in or other exposure to waters with harmful algal blooms may lead to allergic reactions, including irritated eyes, ears and throat, stomachaches, and rashes and skin lesions.
- Cyanotoxins can be very dangerous to dogs. Do not let your dog drink or touch water with a suspected cyanobacterial bloom.

What is being done at a national level to protect human health?

- EPA has identified cyanotoxins as contaminants for possible future regulatory action.
- EPA has taken a precautionary approach to protecting drinking water by creating a health advisory. A health advisory is created by EPA when there is not enough information to create a maximum contaminant level but there is enough information to create concern.
- Several states have requirements that utilities monitor for cyanotoxins and that consumers be notified when results show elevated levels in water in the distribution system.

What are you doing to protect our community from cyanotoxins?

- Delivering safe water is our mission.
- We regularly test our water sources to ensure our water quality meets or exceeds all EPA regulations and guidelines.
- We follow new information developed by research and health agencies on cyanobacteria and all emerging contaminants, closely.

Where can you go for more information?

- To learn more about your water quality please visit our website to review our annual water quality report.
- If you have additional questions about your water quality, please contact us.
- EPA
- CDC
- DrinkTap.org
- AWWA

Quick Response Sheet

TOPIC: Infrastructure Funding

Core Messages

- The costs of delivering clean, safe, reliable water to our customers (or treating wastewater to ensure a clean environment) are rising and changing, as our infrastructure ages and needs more repairs.
- Share one piece of information about a funding need for your agency that the community can relate to, for example:
  - Show a picture of a broken pipe
  - Relate to how bad traffic is when you must fix another broken pipe
- Share 1-3 consequences of not fixing a problem, for example:
  - Additional traffic disruptions
  - More outages for longer periods of time
  - Need for even more investment in the future
  - Lower bond ratings which means everything we do will cost more
  - Higher future rates
- If you are asking customers to support a rate change, explain this and tell them how they can be supportive.

How do you pay for new infrastructure and repairs and upgrades?

- We use state loans, bonds, cash reserves and fees for new service to help absorb increasing costs and keep rate increases predictable and affordable as we invest in needed infrastructure upgrades and expansion.
- We develop financial plans and conduct rate studies that evaluate our water/ wastewater rates to ensure we can invest in upgrading and replacing our infrastructure while keeping rates fair and equitable.
- We access The Drinking Water State Revolving Fund (SRF); a loan program for infrastructure investment. These loans are funded by federal dollars and typically supplemented by state general funds, which keeps interest rates low.
- Federal appropriations to SRF programs have decreased in recent years. Other federal programs like the Water Infrastructure Finance and Innovation Act are attempting to fill the gap but more needs to be done.

What is happening nationally to invest in water infrastructure?

- In 2012, the American Water Works Association estimated $1.7 trillion in infrastructure investment would be needed to maintain and expand drinking water service over the next 25 years in the United States. Wastewater infrastructure costs are believed to be similar.
- Water utilities have under-invested in renewal and replacement projects to keep water rates low and stable.
- As our water infrastructure continues to age, our rates and charges must catch up with the growing cost of operating, maintaining, expanding and replacing it.

How are you planning for investments in our local infrastructure?

- We stay on top of maintenance and upgrades for our water and wastewater systems and plan for future needs to ensure the best value and least impact to our customers.
- As our community's needs for water and wastewater services grow and change, the way we value, price and use our water must reflect today's water reality.
- We are rising to the challenge, working to forecast future needs and making our system more resilient to evolving regulatory requirements, volatile weather, changing demand and other trends.

Where can you go for more information?

- To learn more about our infrastructure investment please visit our website.
- AWWA
- EPA

Quick Response Sheet

TOPIC: Per- and Polyfluoroalkyl Substances (PFAS)

Core Messages

- Protecting community health is our highest priority.
- We protect community health by regularly testing our water sources to ensure our water quality meets or exceeds all EPA regulations.
- We are closely following the emerging research about PFAS and public health.
- Additional information about PFAS and drinking water can be found on our website.

What are PFAS?

- PFAS are a group of man-made chemicals that can be found in products like nonstick pans, stain repellents and fire-fighting foam.
- PFAS have been manufactured and used in a variety of industries since the 1940s.
- PFAS in drinking water is typically localized and associated with a specific facility that used a PFAS-containing product (manufacturing and firefighter training (fire foam).

What are the human health concerns?

- We are still learning about the health effects of PFAS; private, state and federal research and health agencies are working on it right now.
- PFOA and PFOS (specific PFAS) have been the most extensively produced and studied of these chemicals. Both are very persistent in the environment and in the human body—meaning they don't break down and they accumulate over time with exposure.
- There is evidence that exposure to PFAS can lead to adverse human health effects. The most consistent findings are increased cholesterol levels among exposed populations, with more limited findings and scientific uncertainty related to low infant birth weights, effects on the immune system, cancer (for PFOA), and thyroid hormone disruption (for PFOS).
- It is a priority to learn more. There is currently not enough information about human health concerns related to PFAS in drinking water.

What is being done to protect public health from PFAS?

- EPA has taken a precautionary approach to protecting drinking water by creating a health advisory. A health advisory is created by EPA when there is not enough information to create a maximum contaminant level but there is enough information to create concern.
- We are not required by law to meet an EPA health advisory, but we strive to meet all health advisories as added protection to our community. The health advisory level for PFAS helps us assess treatment options and evaluate if additional treatment or operational changes are needed.
- The current EPA health advisory for PFAS is 70 parts per trillion.

What are you doing to protect our community from PFAS?

- Delivering safe water is our mission.
- We are following EPA health advisory guidelines. We strive to meet all health advisories as added protection to our community.

- We regularly test our water sources to ensure our water quality meets or exceeds all EPA regulations and guidelines.
- We closely follow new information developed by research and health agencies on PFAS, and all emerging contaminants.

Where can you go for more information?

- To learn more about your water quality please visit our website to review our annual water quality report.
- If you have additional questions about your water quality, please contact us.
- EPA
- CDC
- DrinkTap.org

Quick Response Sheet

TOPIC: Safe Drinking Water Information System (SDWIS)

Core Messages

- Submitting our water quality testing data to the Safe Drinking Water Information System (SDWIS) is part of our commitment to drinking water safety.
- Any breach of this commitment, such as a missed monitoring entry, an improperly completed report, a treatment change, or an exceedance of a maximum contaminant level, creates a SDWIS violation.
- Information provided in SDWIS is like a report card for water utility compliance. In most cases, a violation reported in SDWIS indicates that improvements are needed and is not an indication that public health is at risk.
- Although this information is an important indicator of utility operations, monitoring and reporting violations alone do not provide a community with meaningful information about the current safety of their drinking water.
- SDWIS data is complex and can be difficult to interpret correctly.

What is SDWIS?

- The Safe Drinking Water Information System, SDWIS, collects information on utility monitoring programs, utility reporting, treatment and maximum contaminant level (MCL) objectives as directed in Safe Drinking Water Act rules.
- The national Safe Drinking Water Act (SDWA) rules ensure that all water systems share the same minimum water quality standards. Any violation, such as a missed monitoring entry, an improperly completed report, a treatment change, or an MCL exceedance, creates a violation in SDWIS.
- SDWIS is a publicly searchable database managed by EPA that contains information about public water systems and their violations of EPA's drinking water regulations, as reported to EPA by state regulatory agencies.
- The collected data is used by EPA and state agencies to assess implementation of regulations, track contaminant levels, develop national enforcement and compliance priorities, and provide information to the public and Congress.
- As with any large data reporting and collection system, there are opportunities for data collection errors, for the information to be used for purposes it was not created for, or for it to be misinterpreted.

What is a monitoring and reporting violation?

- A SDWIS violation can occur if a utility fails to conduct regular monitoring of drinking water quality or fails to submit monitoring results in a timely fashion to the state or EPA.
- More than 85 percent of violations maintained in SDWIS are monitoring and reporting violations, not health-based violations. These types of violations indicate if a utility did not, for any reason, complete their entire monitoring program as written, or if for some reason the monitoring information was not provided to SDWIS accurately.
- A pattern of monitoring and reporting violations by a utility is problematic because consistently poor water quality data can mean it's hard to know if the water meets all standards.

- Health-based violations can be a result of either a detection of a contaminant above an MCL, failure to provide or maintain treatment at a required level, or failure to implement required changes to facilities and processes for treating water and distributing to customers.

What are the human health concerns?

- Although monitoring and reporting information is an important indicator of utility operations, monitoring and reporting violations alone do not provide a community with meaningful information about the current safety of their drinking water.
- People may be concerned about SDWA violations identified in SDWIS as a health-based violation.
- Due to a utility's multi-barrier approach to protect human health, and the fact that many contaminants create health risks only after repeated exposure, a single health-based SDWIS violation does not necessarily mean the public was exposed to drinking water that could make them ill.
- However, a SDWIS health-based violation is an important indictor and should be taken seriously by the utility.

Where can you go for more information?

- To learn more about your water quality please visit our website to review our annual water quality report.
- If you have additional questions about your water quality, please contact us.
- EPA

Quick Response Sheet

TOPIC: Utility Management and Fiduciary Responsibility

Core Messages

- Public trust is a critical element of providing utility services. We are committed to following industry standards for utility financial management to ensure all our decisions are based on sound utility accounting, management and financial principles.
- As a public water utility, we do not make a profit and receive no revenue from tax dollars.
- Our rates are based on the cost to deliver water to you and take it away to be treated when you are done using it.
- We are governed by <<insert governing body>>, which is charged with ensuring a water and wastewater services to our community. The <<governing body>> designates a <<executive>> to execute its policies and orders and conducts business in open sessions.
- Our utility is transparent and accountable. We want our customers to have access to information about their water and wastewater services, and to hold decision-makers accountable for the decisions we make.
- Transparency and accountability are at the heart of the work we do day-in and day-out and significantly contribute to our ongoing commitment to the people we serve.

How are rate increases decided?

- We regularly conduct rate studies as a best practice to maintain our financial health and to ensure we keep rates fair, equitable and tied to the demand our customers place on our water/wastewater system.
- Rate studies show us whether we will have the revenue we need to maintain our water/wastewater system in the future. It is critical that we continue to reinvest in our water/wastewater infrastructure to keep pace with the need for maintenance and repair.
- The money we collect from your water/wastewater rates provides the revenue we need to maintain our water/wastewater system and ensures we can continue to deliver high quality, reliable water and wastewater service to your home or business.
- We develop an <<annual>> budget based on the planned capital and operating needs for each year. All our costs, from capital infrastructure projects to daily operations to emergency work, are paid for solely by rates and fees, not taxes.

What does my water/wastewater bill pay for?

- We regularly review our financial health by developing multi-year financial plans to guide our operations. We plan for the long term, making investments in our water and wastewater system responsibly and gradually.
- We stay on top of maintenance and upgrades for our water and wastewater systems and plan for future needs to ensure the best value and least impact to our customers.
- We are working to make our system more resilient to evolving regulatory requirements, volatile weather, changing demand and other factors.

- Your monthly water/wastewater bill payments are working to ensure our ability 24 hours a day, 7 days a week to deliver high quality, reliable water and wastewater services in a manner that values our environment, community and economic interests, and sustains the resources entrusted to our care.

Who provides oversight for utility financial planning?

- Our <<governing body>> reviews our annual budget and approves rate changes as needed to support needed maintenance and investment.
- We follow the guidelines produced by the American Water Works Association (AWWA) for financial planning and rate-setting principles.

Additional questions?

- If you'd like to talk about your bill, please contact us. Our customer service representatives can help you understand your bill based on your water use information.
- To learn more about our financial planning please visit our website to review our annual financial report.

Resources:

- AWWA
- EPA

Sources and Additional Resources

Table of Contents of Additional Resources

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Communication Guides and Tools

Strategic Communication Planning: A Guide for Water Utilities. Mobley, J., E. Tatham, K. Reinhart, and C. Tatham. 2006. Project #2955. Denver, Colo.: AwwaRF.
Reports on the role of strategic communication planning in the overall performance and success of drinking water utilities. Establishes the link between high trust and credibility and the ability to communicate effectively. Identifies how strategic communications can become an integral component of drinking water utility planning and operations. Determines the level of resources and funding necessary to achieve an effective strategic communication plan. Provides a guidebook that integrates key findings from past research and this project, to help drinking water utilities develop strategic communication plans. *Includes a CD-ROM.* Published in 2006.

AWWA (American Water Works Association). "Public Communications Toolkit."
This kit contains all AWWA's information on public communication, from talking points to *Journal AWWA* articles to presentations, all in one place for easy access. Specific section devoted to crisis and issue communications.

AWWA G420-17 Communication and Customer Relations
The purpose of this standard is to define the minimum requirements for establishing an effective communication and customer relations plan for a water and/or wastewater utility. An effective plan enhances the general public perception of the utility through frequent and focused communication with utility customers and stakeholders. Among the many benefits of a communication and customer relations plan are increased understanding and support of sustainable rate structures; greater tolerance for service interruptions; better cooperation to keep construction projects on schedule; and improved response to customer-billing issues, resulting in timely payment of bills.

Communicating Water's Value: Talking Points, Tips & Strategies
Water professionals are responsible for shaping and sometimes changing consumers' perceptions about the value of water. Consumers can mistakenly undervalue water's worth by assuming it should be provided at no cost to the public. This book by Melanie Goetz outlines how water professionals can encourage customers to appreciate water as the precious commodity it is by driving the message that it needs to be paid for just like other valuable services. The tactics outlined can be especially useful during situations such as advocating for proposed rate hikes, or when conservation measures are needed. Goetz goes into depth about the consumer behavior and psychology that drives people's understanding of worth. Communicating Water's Value also includes "success stories" from various utilities and corporations who implemented strategies that effectively shaped and changed the public's perception of the value of water.

Social Media Guides and Tools

Effective Use of Social Media for Water Utilities. Eckl, E., A. Huisman, E. Alferez, and M. Brandt. Forthcoming. Project #4638. Denver, Colo.: Water Research Foundation.
This research explores the business case for utility executives and board members to invest in, and engage their customers through, social media. The project offers clear, practical guidance on how utilities can integrate social media engagement into their day-to-day operations and provides resources and templates that staff can customize and put to use at any time. The project helps utilities answer strategic questions, such as:

- When and how should utilities restructure staff, policies, and budgets to begin using social media?
- How can utilities quantify how these efforts perform?
- How do utilities best harness social media to alert customers during crisis events?
- Is it worth it for utilities to expose themselves to this hyperbolic debate, and is there any alternative?

Published in 2017.

Social Media Posting Skills Checklist. Water Research Foundation.
As part of project #4638, the research team developed a tool to help utility staff prepare quality content for their social media accounts. With explanatory videos, this tool shows users how to apply social media best practices to their posts.

Eleven myths about social media every utility manager should know—and how to overcome them, Villegas, S., *Journal AWWA*, 2013
Many utilities are uncomfortable with social media; this article presents strategies for overcoming communications myths and using social media successfully.

Are You Ready for the TV Cameras? Communicating with the Media and the Public Following Negative Incidents. Hoffman, J., J. Moyer, *Journal AWWA*, 2007
This article discusses having a crisis communication plan (CCP) in place for addressing the public and the media following any type of negative incident. Also, it stresses the importance of having a designated public information officer (PIO) to act as the primary liaison with the media agencies. The article lists the basics of communications, the reality of the media, putting a "face" on the organization, preparing employees and other key stakeholders, preparing the message, being honest, and checking your crisis readiness.

Risk Communication Guides and Tools

Media and Community Crisis Communication Planning Template
This planning template is based on the research and teachings of Dr. Vincent Covello and Dr. Tim Tinker, both internationally recognized experts in the field of risk and crisis communication. The planning template was developed by Widmeyer Communications, Inc. Special thanks to Foundation Coal Holdings, Inc. (FCL) for allowing the review, use and

THINKING, FAST AND SLOW, by Daniel Kahneman. (Farrar, Straus & Giroux.)
The winner of the Nobel in economic science discusses how we make choices in business and personal life and when we can and cannot trust our intuitions. The book summarizes research that Kahneman conducted over decades, often in collaboration with Amos Tversky.[3][4] It covers all three phases of his career: his early days working on cognitive biases, his work on prospect theory, and his later work on happiness.[not verified in body]

Daniel Kahneman: The riddle of experience vs. memory | TED Talk

The Determinants of Trust and Credibility in Environmental Risk Communication: An Empirical Study
Richard G. Peters
Vincent T. Covello
David B. McCallum
First published: 29 May 2006
This study examines a key component of environmental risk communication; trust and credibility. The study was conducted in two parts. In the first part, six hypotheses regarding the perceptions and determinants of trust and credibility were tested against survey data. The hypotheses were supported by the data. The most important hypothesis was that perceptions of trust and credibility are dependent on three factors: perceptions of knowledge and expertise; perceptions of openness and honesty; and perceptions of concern and care. In the second part, models were constructed with perceptions of trust and credibility as the dependent variable. The goal was to examine the data for findings with direct policy implications. One such finding was that defying a negative stereotype is key to improving perceptions of trust and credibility.

Best Practices in Public Health Risk and Crisis Communication
VINCENT T. COVELLO
Journal of Health Communication, Volume 8, 2003 - Issue sup1
A checklist of risk communication actions.

Risk communication, risk statistics, and risk comparisons: A manual for plant managers
VT Covello, PM Sandman, P Slovic - 1988 - psandman.com
There are no easy prescriptions for effective risk communication. However, those who have studied and debated risk generally agree on seven cardinal rules (see Covello and Allen, 1988). Although many of the rules may seem obvious, they are continually and consistently violated in practice. As a plant manager, you can build a successful risk communication program on these rules.

Risk Communication Guides: By Topic

Biosolids

Biosolids Communications Bundle: Communication Strategies to Help Biosolids Professionals Build Community Confidence, Biosolids (Completed).
Water Environment Research Foundation (WERF) researchers have developed communication strategies to help biosolids professionals build stakeholder confidence, in communities where they land apply.

Building trust

Forging Powerful and Sustainable Relationships Between Clean Water Agencies and the Community. Water Research Foundation
This project investigated how clean water agencies (CWAs) can leverage emotional motivators in public engagement programs to create longstanding relationships with the community. Effective messaging and educational materials and/or programs that take advantage of research on emotional connectors is vital to tangibly demonstrate the value of water and the technology that creates clean water.

How Should I Respond to Customer Questions About Water Quality?, Mercer, K., AWWA, *Opflow*, 2010
This month's question asks how to respond to customers' questions about recent articles in The New York Times regarding contaminated drinking water. The article suggests a response based on reassuring the customer that the primary objective of every water utility is to protect public health by providing high-quality, safe drinking water and sufficient water for firefighting. The article discusses how a network of government agencies monitors drinking water quality, describes how federal regulations set maximum contaminant limits, explains how Consumer Confidence Reports provide customers with information on water quality, and suggests that utilities take a proactive approach by communicating with their customers any water quality issues and media reports of health risks. The article also stresses the importance of source water protection as the most effective way to prevent contamination of drinking water.

Risky Business: Factoring in Public Perceptions, Goetz, M., AWWA, Journal, 2015
Revealing the risks and laying out the benefits of action can be smart ways for a water utility to gain the confidence of its customers when communicating a problem or potential concern.

The Principles of Risk Communication: IGNORING THEM CAN BE HAZARDOUS TO YOUR HEALTH!, Grimm, M. W., AWWA, Journal, 2005
This article discusses the principles of risk communication, which involve public health, behavioral science, and communication. Seven basic rules of risk communication are provided, along with the U.S. Environmental Protection Agency's Drinking Water Academy website, and AWWA's website for its 2005 seminar on crisis communications.

Advancing Collaborations for Water-Related Health Risk Communication. Parkin, R., L. Ragain, R. Bruhl, H. Deutsch, and P. Wilborne-Davis. 2006. Project #2851. Denver, Colo.: Water Research Foundation.
Provides drinking water utilities with a framework for developing an ongoing, collegial relationship with the local public health and medical communities resulting in cooperative, informed decisions, and effective use of communication strategies related to existing and emerging water quality issues. Research partner: EPA. Published in 2006.

Write Consumer Confidence Reports Customers Can Understand, Phetxumphou, K., S. Roy, B. Davy, P. Estabrooks, W. You, A. Dietrich, AWWA, *Opflow*, 2017
Consumer Confidence Reports (CCRs) should be clearly understood by all consumers, but they often fall short of their goal. Using common communication tools, water utilities can improve their CCRs.

Understanding and Enhancing the Impact of Consumer Confidence Reports. Lazo, J. K., J. L. Pratt, C. N. Herrick, M. L. Hagenstad, R. S. Raucher, R. E. Hurd, and E. H. Rambo. 2004. Project #2692. Denver, Colo.: AwwaRF.
Evaluates the impact and effectiveness of utility communications required by the Consumer Confidence Report (CCR) program. Includes researching customer perceptions about their drinking water utility, customer understanding of current and emerging water utility issues, and effectiveness of the utility communication program. Also considers communications about arsenic. Research partner: EPA. Published in 2004.

Climate Change

Effective Climate Change Communication for Water Utilities. Raucher, R., K. Raucher, A. Leiserowitz, S. Conrad, M. Milan, and D. Dugan. 2014. Project #4381. Denver, Colo.: Water Research Foundation.
This project produced a guidance document to assist water utilities in communicating about climate change, with an emphasis on building support for water utility climate-related adaptation or mitigation investments or projects. A message mapping worksheet is included within the report to help water agencies develop messages that will build long-term support for their specific climate-related actions. Lastly, the project produced a video to provide water professionals with the information they need to understand the relationship among water, water utility needs, and climate change. Completed in 2014.

Compounds of Emerging Concern

Evaluation of Current and Alternative Strategies for Managing CECs in Water. Project Rauch-Williams, T., S. Snyder, J. Drewes, and E. Dickinson. 2016. #4494. Denver, Colo.: Water Research Foundation.
This project aggregated and evaluated management plans for compounds of emerging concern (CECs) that have been employed or are being considered in North America, Europe, and Australia. Strengths and weaknesses of each were identified, considering a holistic water approach that takes into account environmental and public health. A framework for assessing the financial, environmental, and social costs and benefits for managing CECs in surface water was developed, and this triple bottom line analysis was then used to evaluate selected approaches. Published in 2018.

Daniel, P., and J. Bywater. 2012. "Water Utility Tool for Responding to Emerging Contaminant Issues." Project #4169. Denver, Colo.: Water Research Foundation.

Develop Effective Communications About Emerging Contaminant Risks, Reekie, L., A. Fulmer, AWWA, *Opflow*, 2015
A range of resources is available to help water utilities develop core messages and strategies to communicate about the relative risk of contaminants of emerging concern (CECs) with different audiences as well as facilitate dialogue among key stakeholder groups to foster agreement on CEC issues and solutions.

Risk communication and media coverage of emerging contaminants, Ragain, Lisa. AWWA, Journal, 2009
As it becomes more common to communicate with customers about issues of complex science whose health effects are not well understood, it is imperative for utilities to understand the perceptions their different audiences have about drinking water and public health. Utilities must also acknowledge the role that trust plays in communications and make efforts to gain and keep the trust of their customers and the general public. The Associated Press series of articles about pharmaceuticals in drinking water that were published in media outlets around the country are presented here as a case study. The author explains how risk communication principles are used and offers suggestions for applying these principles in utility communications, specifically when addressing pharmaceuticals and other emerging issues.

Contaminant Risk Management Communication Strategy and Tools. Mobley, J., K. Reinhardt, E. Speranza, and M. Burke. 2010. Project #4001. Denver, Colo.: Water Research Foundation.
Develops an overall contaminant risk management strategy and individual contaminant tools to help utilities provide this information to customers during routine, emerging, and emergency situations in a more credible and expeditious manner. Research partner: UKWIR. Published in 2010.

Risk Communication for Emerging Contaminants. Parkin, R., L. Ragain, M. Embrey, C. Peters, G. Butte, and S. Thorne. 2004. Project #2776. Denver, Colo.: AwwaRF.
Develops, tests, and evaluates proactive strategies and tools for utilities to identify and track emerging drinking water contaminants (e.g., endocrine disruptors, pharmaceuticals, MTBE [methyl tertiary-butyl ether], radon, etc.). Also provides strategies and tools for utilities to proactively and effectively communicate information to the public about the emerging contaminants. Published in 2004.

Cryptosporidium

Protocol for Cryptosporidium Risk Communication. Small, M. J., B. Fischhoff, E. A. Casman, C. Palmgren, and F. Wu Morris. 2002. #444. Denver, Colo.: AwwaRF.
Presents written protocols for implementing voluntary and mandated Cryptosporidium risk communication programs, using standard consumer marketing strategies and established risk communication techniques. Provides methods for utilities to measure the effectiveness of the programs. Published in 2002.

Desalination

Development of Public Communication Toolkit for Desalination Projects, Desal-12-02 (Completed).
As many communities consider desalination as a sustainable water source that can bolster their water portfolios, public and private agencies proposing desalination projects face questions about energy usage, brine disposal, and impacts to marine life. Any new water project—whether it's a dam, reservoir, or recycled water project—can face significant hurdles when it comes to public acceptance. The project provides municipalities and other water purveyors with a roadmap to craft their own strategic public outreach plans in support of a desalination project.

Elected Officials

Public Communication - Perception and Early Communications Tools, SAM1R06a (Completed).
This report provides the initial results of research designed to understand elected and appointed officials' perspectives on asset management and infrastructure sustainability. The authors use results of a survey, focus groups, interviews, and case studies to understand how public support for infrastructure sustainability can be attained. The report identifies tool and messages that elected, appointed, and salaried public officials can use in communication with their stakeholders. Published by WERF. 56 pages. Soft cover and online PDF. (2009

Emergency management

Effective Risk and Crisis Communication during Water Security Emergencies. Covello, V., S. Minamyer, and K. Clayton. 2017. Washington, D.C.: EPA Office of Research and Development.
This report summarizes results from three water security risk communication message mapping workshops conducted by U.S. EPA's National Homeland Security Research Center during 2005/2006. It provides information about effective message development and delivery that could be useful to water sector organizations as they develop their respective risk communication plans.

Drinking Water Advisory Communication Toolbox, Centers for Disease Control and Prevention (CDC)
The Drinking Water Advisory Communication Toolbox provides information for water utilities on how to plan for, develop, implement, and evaluate communication activities with the public and stakeholders during drinking water notifications and advisories. This toolbox includes instructions on how to prepare for communication activities before an incident, how to communicate during an incident, templates and tools to use, and recommendations for follow-up actions and assessments after an incident. The purpose of the toolbox is to enable water systems to communicate effectively with partners, stakeholders, and the public in the event of a drinking water advisory in order to protect public health.

Principles of Risk Communication. *Journal AWWA*. April 2005.

2016a. "Emergency Response for Drinking Water and Wastewater Utilities." Accessed June 14, 2016.

Tools for water utility communication during emergency response

Need to Know: Anticipating the Public's Questions during a Water Emergency. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-12/020, 2012.
The EPA plays a critical role in this effort as the lead federal agency for water security. The overall objective of this study was to provide practical information that crisis communicators can directly apply to planning and response. EPA's National Homeland Security Research Center (NHSRC) and the Water Information Sharing and Analysis Center (WaterISAC) partnered in 2012 to produce the webcast "Anticipating the Public's Questions during a Water Emergency." Featuring NHSRC staff, the webcast covered the results of interviews with the public and drinking water professionals about the information the public would want in the case of an intentional municipal water supply contamination.

Water Utility Public Awareness Kit. U.S. Environmental Protection Agency, Washington, DC
Use this kit to help inform your customers and community about the threats to your water system and motivate them to take action. By using several of the most effective communications methods - print, web, and TV - you will reinforce the message and drive home the Call to Action:
Be aware
Be prepared
Show you care

Hexavalent Chromium

Eaton, A. L. M. Ramirez, and A. Haghani. 2001. "The Erin Brockovich Factor: Analysis of Total and Hexavalent Chromium in Drinking Waters." AWWA Water Quality Technology Conference, Nashville, TN

Lead

Transparent Communication Builds Trust Regarding Lead in Drinking Water, Davis, J.C., AWWA, *Opflow*, 2018
Legacy lead pipes and plumbing create the risk of potential lead exposure, whether through utility-owned service laterals; privately owned lines; or home fixtures, fittings, and solder. AWWA's lead communication tools can help water providers reach out to stakeholders about this public health issue.

Lead Communication It's Not What You Say but How You Say It, Smith, Kelley Dearing, AWWA, *Opflow* 2018
Water utilities face a communications challenge whenever they discuss lead in drinking water. Lessons learned from a major utility regarding its lead service line replacement program provide valuable insights on communicating with the public about lead.

Lead Communications, AWWA online tools
Frequent and transparent communication is key to keeping our communities safe from lead in pipes and plumbing. This package helps utilities communicate with confidence by providing adaptable outreach documents, samples from colleagues across North America and off-the-shelf AWWA tools. Learn more from Lead in Drinking Water: Talking to Your Community.

Legionella

Customer Messaging on Opportunistic Pathogens in Plumbing Systems. Water Research Foundation.
The overall goal of this project was to develop and validate a series of messages for OPPPs, with a focus on *Legionella*, to educate various customer groups on the steps they need to take to better protect themselves from waterborne disease from their own premise plumbing.

Pharmaceuticals, EDCs and PPCPS

Pharmaceuticals and Endocrine Disrupting Compounds in Water: A Primer for Public Outreach. Bruce, G. M., and R. C. Pleus. 2015. Project #4387. Denver, Colo.: Water Research Foundation. Executive Summary Available
This project distilled and synthesized current information on EDCs and PPCPs into a primer, with supporting citations and communication materials, which drinking water utilities can use to inform and communicate with non-technical audiences. The primer (4387a) is a centralized up-to-date data source that can provide a landmark for future summaries of EDCs and PPCPs in water, as well as a reference source for

further information. In addition, a final report (4387b) was published that includes a comprehensive overview of EDCs and PPCPs in water. Lastly, a slide deck, available under Project Resources/Presentations, was developed to help utilities communicate to others about PPCPs and EDCs in water. The slides can be used by utilities in their own presentations. Published in 2015.

Consumer Perceptions and Attitudes Toward EDCs and PPCPs in Drinking Water. Rundblad, G., C. Tang, O. Knapton, L. Ragain, M. Myzer, A. Tytus, J. Breedlove, and R. Cooke. 2013. Project #4323. Denver, Colo.: Water Research Foundation.
This project developed tools and guidance on understanding consumer perceptions and attitudes towards endocrine disrupting compounds, pharmaceuticals, and personal care products (EDCs/PPCPs) in drinking water to improve future communications and responses by the drinking water industry. In addition to the research report, the project developed 5 recommendation documents for different utility personnel, a document containing lists representing the most prominent terms used to refer to EDC and PPCP contaminants in water in the U.S. media, and a PowerPoint presentation that summarizes the results, which utilities can use for their own presentations. These additional deliverables are available on this project page under Project Resources. Published in 2013.

Core Messages for Chromium, Medicines and Personal Care Products, NDMA, and VOCs. Macpherson, L, E. Callaway, S. Snyder, S. Venette, T. Sellnow and P. Slovic. 2015. Project #4457.Denver, Colo.: Water Research Foundation.
This project developed core messages for the water community to communicate with different audiences about the risks of key, priority CECs that, not only help explain the risks, but also account for consumer risk perceptions. It also provides guidance to water utilities regarding risk communication for different types of CECs in general. In addition to the research report, the project produced an animated film, *Protecting Our Drinking Water,* which provides context about the following four targeted substances in drinking water: chromium, medicines and personal care products, NDMA, and VOCs . The project also produced question-and-answer articles (referred to as core message sheets or "Thinking about" sheets) for each of the four substances. Lastly, the project developed background technical information sheets to provide succinct information related to occurrence, toxicity, and treatment efficacy for each of the substances. The animation is available to view below. The animation can also be downloaded and displayed on your Website. The Core Message Sheets and Technical Information Sheets are available under Project Resources/Project Papers. Completed in 2016.

Rates

Rate Approval Process Communication Strategy and Toolkit. Mastracchio, J., A. Santos, R. Giardina, R. Raucher, K. Raucher, M. Wyatt Tiger, J. Hughes, and R. Atwater. 2016. Project #4455. Denver, Colo.: Water Research Foundation. Executive Summary Available
The primary objective of this project was to identify and develop communication strategies and specific messages that utilities can use to gain support during their rate and budget approval process, and complement these communication strategies and messages with a set of scalable and ready-to-use products to support utilities and governing boards throughout this process.

Reuse

Public Outreach for Potable Reuse: Bringing the Public to a New Level of Acceptance, Katz, S., P. Tennyson, *Journal AWWA*, 2015
Public outreach for potable reuse requires a strategic approach to ensure success in helping the public understand that potable reuse water is safe for drinking.

SDWIS

AWWA (American Water Works Association). 2019. "A Safe Drinking Water Information System (SDWIS) Communication Resource"
This guide provides tips and tools for communicating clearly and effectively about the Safe Drinking Water Information System (SDWIS), using risk communication best practices. It offers a risk communication tip sheet, talking points for understanding SDWIS, guidance for responding to SDWIS in the media, and guidance on how to identify and respond to the misuse of SDWIS data in the media.

TOC

Communication Principles and Practices, Public Perception, and Message Effectiveness, CEC2C08 (Completed).
Water and wastewater utilities communicate with customers, the media, and other stakeholders about the presence of trace organic compounds (TOCs) in water supplies and the potential risks to human health and the environment. This project reviewed previously published communications research and analyzed media reports about trace organic compounds. Ten utilities share their perspectives and describe their outreach programs, communication methods, key messages, and thoughts about communication deficiencies or needs. The researchers developed a framework to help utilities as they present and monitor the effectiveness of communication strategies and materials. Published by WERF. 298 pages. Soft cover report and online PDF. (2009)

Water Quality

Customer Attitudes, Behavior and the Impact of Communications Efforts. Tatham, E., C. Tatham, and J. Mobley. 2004. Project #2613. Denver, Colo.: AwwaRF and AWWA.
Identifies factors that affect customer satisfaction, including communication of information about water quality issues. Reports on ways to inform customers about water quality issues, and provides guidance on communication strategies. Includes a CD-ROM. Published in 2004.

DrinkTap.org, AWWA, answers questions about water and water quality
Provides information that answer the following questions/address the below issues:
Questions about water?
Water Conservation
What's in my Water?
Risk Communication: Other Issues

Getting to Know Your Stakeholders in Advance of a Rate Change, Davis, M., M. Elliott, K. Snyder, *Journal AWWA*, 2017
While often considered to fall on the "softer side" of the water profession, effective customer and stakeholder communication is founded on data, qualitative and quantitative research, and strategic thinking, just like any other water planning effort. This is particularly true when lack of community understanding about or support of investment can stop all other utility activities midstream, which is the case for communication associated with cost of service and rate modifications.

Specific Research Sources

USA TODAY: https://www.usatoday.com/story/news/2017/08/14/63-million-americans-exposed-unsafe-drinking-water/564278001/

2016 Kaiser Family Foundation: https://www.kff.org/health-reform/press-release/flint-fallout-water-supply-safety-now-near-top-of-publics-national-health-concerns-trailing-cancer/

Buried No Longer: Confronting Americas Infrastructure Challenge. AWWA.2012. http://www.climateneeds.umd.edu/reports/American-Water-Works.pdf

Media and Community Crisis Communication Planning Template https://nma.org/wp-content/uploads/2016/08/Crisis-Communications-Template.pdf

American Water Works Association