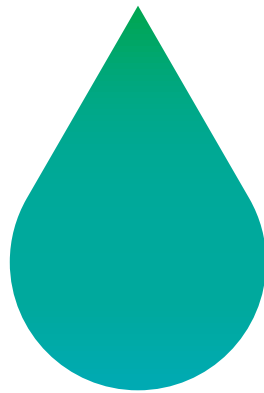


One Water Change Leadership for Utilities:

SIX ESSENTIAL CAPACITIES





PREFACE

One Water is taking root across the nation. In recent years, the movement has spread throughout the water sector, to advocates, partners, and even policymakers. We have seen One Water in action, successfully taking on the most pressing water challenges of our time. From upstream nutrient reduction on farms to new approaches for lead service line replacement and affordability programs; from achieving net zero energy or building robust resilience plans to working with industry, government, and communities to address water quality threats and concerns—One Water is bringing forth a great era of change for water management.

At the heart of this movement are people making it happen. In this report, we look beyond the innovative efforts and projects to detail the *who* and *how* of One Water. We explore what makes One Water change leaders tick. We put forth a framework with six essential capacities that enable current and future leaders to successfully drive One Water projects and programs. While this report looks specifically at water and wastewater utilities, there are many different stakeholder groups engaged in the transformation to One Water. As you read, you'll find the information here applies elsewhere in the sector. In fact, the capacities can be, and *are* being, learned. To that end, this report demonstrates the six capacities in action and offers advice for up-and-coming leaders as they embark on their own One Water journeys.

At the US Water Alliance, we believe in a sustainable water future for all. To get there, we need strong leadership that stretches beyond comfort zones and thinks creatively. We need bold leadership that acts intentionally and engages all stakeholders in pursuit of a better future for people and the planet. We need One Water leaders in every city and town, in all sectors, and across all professional levels. We are committed to growing this field of practice for current and next-generation leaders. Everyone can be a One Water leader, and we hope you'll join us in the conversation on how to make that happen.

One Water. One Future.



Michael Carlin
*Deputy General Manager
and Chief Operating Officer,
San Francisco Public Utilities
Commission; Board Chair,
US Water Alliance*



Radhika Fox
*Chief Executive Officer,
US Water Alliance*

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Finally, this work would not have been possible without the 10 changemakers featured in the report. We thank them for their time and willingness to participate in interviews. We are particularly grateful for their openness to look inward and share their stories. These exceptional utility executives go beyond the call of duty in their choice to lead the sector toward One Water:

- **Norma Camacho**, Valley Water
- **Kyle Dreyfuss-Wells**, Northeast Ohio Regional Sewer District
- **Mami Hara**, Seattle Public Utilities
- **Ted Henifin**, Hampton Roads Sanitation District
- **Andy Kricun**, Camden County Municipal Utilities Authority
- **Jim Lochhead**, Denver Water
- **Michael Mucha**, Madison Metropolitan Sewerage District
- **James A. (Tony) Parrott**, Louisville/Jefferson County Metropolitan Sewer District
- **Kishia Powell**, City of Atlanta Department of Watershed Management
- **Kathryn Sorensen**, City of Phoenix Water Services Department

We also thank the support staff of these great change-makers who helped make this report possible. Your work behind the scenes is noticed and appreciated.

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INTRODUCTION

Across the country, water utilities, in close collaboration with a diverse range of stakeholders, are acting as catalysts for change. In Hampton Roads, VA, a regional wastewater utility is combatting sea level rise and land subsidence with an innovative groundwater recharge project. Water managers in Louisville, KY, are working with their counterparts in other city agencies to reform workforce and procurement processes that improve training and hiring of vulnerable populations. In Camden, NJ, utilities, environmental organizations, community members, and city agencies have formed an unprecedented collaborative to install over 49 green stormwater infrastructure projects to address flooding and water quality issues. In Madison, WI, utilities and farmers have initiated partnerships across a watershed to reduce nutrients and deliver impressive water quality improvements. In Denver, CO, the drinking water utility has set forth a far reaching and proactive plan to accelerate the removal of lead service lines in homes throughout the metropolitan area.

There are many signs that water management in the United States is entering another great era of change and innovation. Referred to as One Water, this shift in how we view, value, and manage water is taking root across the nation. When we discuss the factors that are driving One Water solutions, we often focus on the technical and policy underpinnings. However, underlying the One Water innovations spreading throughout the country is a **story of change leadership** that is shifting the water sector toward this more holistic, sustainable, and inclusive approach.

At the US Water Alliance, we believe that realizing the promise and potential of One Water requires a new kind of change leadership. The water sector is evolving rapidly and is characterized by growing complexity. The leader of tomorrow will need fundamentally different skills than the established management practices prevalent in the water sector today. For water and wastewater utilities specifically, this will require a transformation of how these agencies see themselves in the community, what they do, how they do it, and who their partners are.

This report contributes to the growing body of analysis and documentation of the One Water approach. It focuses on an overlooked dimension: **the essential leadership capacities that individuals at water utilities need to guide change toward One Water**. The report explores questions such as: what are the capacities—the knowledge, skills, and attitudes—we need to cultivate in order to drive One Water change? How do utility managers successfully navigate through the cultural, political, economic, and human dimensions of One Water management, in addition to the technical components?

To answer these questions, we conducted in-depth interviews with 10 utility executives who are well-known in the water industry as transformative leaders—in this report we call them **changemakers**. We synthesized their experiences and insights into six leadership capacities that can inform existing water utility staff as well as future professional development efforts throughout all levels of the water sector.

This report is organized in the following manner:

- **The One Water Approach.** One Water explained—what it is, why it’s needed, and key components.
- **Meet 10 One Water Changemakers.** Short profiles of 10 utility executives who are transforming their organizations toward One Water.
- **Six Essential Capacities for One Water Change Leadership.** Descriptions of six capacities that drive One Water leadership, including how leaders use them to produce change, stories of the capacities in action, and advice for other One Water changemakers to cultivate these capacities in themselves.
- **Conclusion.** Reflections on implications for the water sector and a call to action to accelerate our transformation to One Water through change leadership.

The resulting framework provides important insights for advancing One Water leadership, with a particular focus on utility executives at large and mid-sized utilities. However, what we found applies to other One Water agents of change. Many of the leadership capacities identified can translate to utilities of all sizes and other types of institutions applying a One Water approach. Whether you are an environmental group focused on watershed protection, an engineering company driving more efficient treatment processes, a water reliant business implementing stewardship practices across your supply chain, a regulator considering flexible management approaches, or a community advocate, there is something to learn here and offer back to the sector.

The US Water Alliance believes **anyone** can be a One Water leader—and in fact, **everyone** must be a One Water leader in order to secure our nation’s water future. Change leadership is a practice that is grown and exercised. It is not a position on an organizational chart or a job title. We hope this report supports an acceleration of change leadership in the water sector by encouraging the growth of these capacities in ourselves, one another, and the next generation.

THE ONE WATER APPROACH

One Water is both a way of thinking and a way of doing. The One Water approach envisions managing all water in an integrated, inclusive, and sustainable manner to secure a bright, prosperous future for our children, our communities, and our country. One Water is a transformative approach to how we view, value, and manage water—from local communities to states, regions, and the national scale.

Why One Water?

This century is unfolding an unparalleled, complex set of water challenges. Aging infrastructure must meet stricter regulations. Our climate future is uncertain, yet most impacts are already felt first and foremost in the water sector. PFAS, microplastics, and antibiotic-resistant genes permeate wastewater systems and threaten public health. Federal funding for water infrastructure has continued to decline over the last 40 years, especially in proportion to overall investment. An entire generation of the water workforce is nearing retirement.

The water sector was not originally designed to solve these challenges. Many of the traditional assumptions and approaches used to design, build, and operate our existing systems don't consider how water is connected to communities or other natural resources, which means strategies can end up exacerbating inequities or environmental issues. Our historic governance structures for managing water are also siloed and ineffective. The urgent, multifaceted nature of water issues calls for new ways of thinking, acting, and investing. Water is a bridge that connects everyone and everything across institutional, political, social, and geographic boundaries. One Water strategies build this bridge to address our 21st century water challenges. This is why utilities and communities around the nation are pursuing a One Water approach.

What Brought Us Here

Our water infrastructure developed over time in a piecemeal fashion to meet the evolving needs of society. We built storage for water supplies and treatment systems to provide clean drinking water. We built sewers

to carry away waste from communities, then treated wastewater to better protect public and environmental health. Communities needed flood protection, so we built drainage systems to convey water and channelized our rivers to make them wide and deep enough to hold bigger rains. With growing environmental concerns in the late 20th century, we began managing point and non-point source pollution. When resources became constrained, we began thinking about fit-for-purpose use and conservation. We developed new technologies and integrated management strategies to protect future water resources. As needs evolved, so too did our infrastructure, technologies, and approach.

For these reasons, our water management systems are siloed. Water infrastructure and processes pulsed silently beneath our streets and behind our taps. The dedicated engineers who run these systems day in and day were out of sight and mind for most Americans. Things were, for the most part, operating as they should be. Regulatory, financial, and governance structures followed, formalizing these separately managed silos for drinking water, wastewater, and stormwater. The stovepipes have been reinforced at every level of government—from the Clean Water Act and Safe Drinking Water Act at the federal level, to how water is regulated at the state level, and even the fragmented nature of how local utilities and city agencies are organized. In addition, water resources are influenced by agricultural, industry, and ecosystem management—often in ways that are separate from the decisions made by water utilities and community actors within the same watersheds.

Getting to One Water

One Water can take many different forms. It may vary from one community to the next, with different policies and practices, but the One Water approach has a set of unifying characteristics. The hallmarks of a One Water approach are:

- The mindset that **all water has value**, from the water resources in our ecosystems to our drinking water, wastewater, and stormwater.

- A focus on **achieving multiple benefits**, meaning that our water-related investments should provide economic, environmental, and societal returns.
- Approaching decisions with a **systems mindset**, one that encompasses the full water cycle and larger infrastructure systems.
- Utilizing **watershed-scale thinking and action** that respects and responds to the natural ecosystem, geology, and hydrology of an area.
- Intervening with **right-sized solutions** to achieve the desired outcome.
- Relying on **partnerships and inclusion**, recognizing that real progress will only be made when all stakeholders have a seat at the table.

The US Water Alliance network is advancing One Water through six major arenas for action:

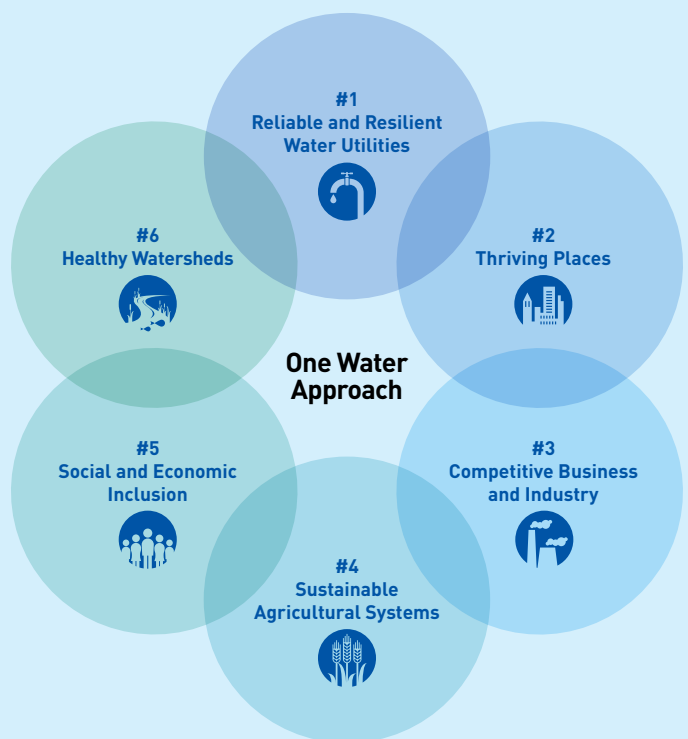
- **Reliable and Resilient Water Utilities.** Approaches that create efficiencies in water service delivery. This may include water supply diversification, resource recovery, retrofitting grey infrastructure and balancing it with green infrastructure, forging new business models, and more.
- **Thriving Places.** Approaches that manage water resources to create more vibrant neighborhoods, support sustainable and climate-resilient development, and reduce impacts to local business and industry resulting from unexpected shutdowns due to water emergencies. This may involve coordinating across city departments for “dig once” approaches, leveraging new technologies to employ smart growth and manage climate impacts, and integrating water planning across jurisdictional boundaries.
- **Competitive Business and Industry.** Approaches that encourage integrating water stewardship into business operations such as conserving water, reusing water, or managing stormwater at industrial facilities, and participating in upstream-downstream partnerships.
- **Sustainable Agriculture Systems.** Approaches that balance the growing demand for food, increasing farmer profitability, and protecting the environment and public health. Some examples include on-farm strategies to conserve water and manage nutrients and watershed modeling for soil health.
- **Social and Economic Inclusion.** Approaches that ensure all people regardless of income, race, or geographical location, have access to clean, safe, and affordable water and wastewater services. This involves building

a safety net, leveraging water investment for community benefits, fostering community resilience, and enhancing community capacity to engage in water management and decision-making.

- **Healthy Watersheds.** Approaches that maximize natural infrastructure to protect forests and other ecosystems, manage groundwater for the future, and utilize citizen science for ecosystem monitoring and restoration.

Taking action in each of these arenas involves complex and interwoven solutions with many partners across jurisdictions. It requires breaking down barriers not only within the water industry, but also among all the other stakeholders who influence, and are influenced by, the management of water resources. Community and business leaders, industries, farmers, environmental advocates, conservationists, policymakers, academics, and many others, all play important roles in the quest to secure a sustainable water future for all.

Six arenas for action



MEET 10 ONE WATER CHANGEMAKERS

The six essential leadership capacities we describe in this report surfaced through discussions with 10 utility managers in the US Water Alliance network who are successfully driving One Water in their communities. The 10 changemakers we interviewed were chosen from the network because they represent a range of backgrounds, geographies, water challenges, and solutions that use a One Water approach. These 10 changemakers manage drinking water, wastewater, and stormwater utilities. They have varied educational and professional expertise. Some are licensed engineers, while others studied communications, law, biology, administration, or architecture. They have worked in water utilities—both large and small—as well as city departments, nonprofits, and academic institutions across the United States, with a combined total of more than 75 years in utility leadership positions. Their diverse backgrounds and experiences illustrate that One Water leadership is not dependent on a utility’s size, type of water services, or annual budget.

Norma Camacho

Chief Executive Officer,
Valley Water, California



“I have learned to get out of my comfort zone, maybe even into areas I’m not welcome. The real challenge is to overcome our fear of failure and to say YES to new ideas.”

Professional Background: Civil Engineering—Structures

Been at Utility: Since 2012

Utility Profile: Manages wholesale water, groundwater, flood protection, and environmental stewardship for 2 million people in Santa Clara County, CA. Valley Water has 800+ employees.

Previous Position: Chief Operating Officer of Watershed Operations, Valley Water

Fun Facts:

- Started her career as a design engineer working on cooling systems for nuclear power plants.
- Believes curiosity is one of the most important qualities to maintain as a leader.
- Grew up in a bicultural household in the 1960s/70s.

Leadership Style: Others say that Norma has the “ability to lead through complexities” and she focuses on “serving the community.”

Kyle Dreyfuss-Wells

Chief Executive Officer,
Northeast Ohio Regional Sewer
District (NEORS), Ohio



“Everyone brings something of value. It’s important to have a range of backgrounds, expertise, and experiences in your organization to bring the most creative mix to solving complex public sector problems. There are lots of ways to integrate.”

Professional Background: Environmental Policy and Science, Ecology

Been at Utility: Since 2008

Utility Profile: Manages wastewater and stormwater for over 1 million residents in Cleveland, OH and 61

surrounding communities across portions of four counties and 355 square miles of the Lake Erie watershed. NEORS has over 800 employees.

Previous Position: Director, Chagrin River Watershed Partners (Ohio)

Fun Facts:

- Grew up in the Cleveland area.
- Installed bioswales on her own property.
- Served as a Peace Corps Volunteer in Samoa.

Leadership Style: Others describe Kyle as a “problem-solving spirit,” a “visionary pioneer,” and an “incredible finder of time.”

Mami Hara

General Manager / Chief Executive Officer, Seattle Public Utilities (SPU), Washington



“How we work with the community says everything about our values as an institution. Culture change is fundamental to allowing ourselves to think of our interconnections, relationships, and work in a different way.”

Professional Background: Planning, Urban Design, Landscape Architecture, Environmental Design

Been at Utility: Since 2016

Utility Profile: 1,400 employees provide drinking water to 1.5 million people in the greater Seattle area and deliver drainage and wastewater, solid waste, and clean city services to Seattle’s over 750,000 people.

Previous Position: First Deputy Commissioner and Chief of Staff, Philadelphia Water

Fun Facts:

- Originally from the East Coast.
- Born of Japanese immigrant parents.
- Inspired by her family’s “design with nature” mindset.

Leadership Style: Others say she has a “strong commitment to equity” and that “sustainability drives her work.”

Ted Henifin

General Manager, Hampton Roads Sanitation District (HRSD), Virginia



“There is no One Water magic. It’s really just long-term relationship building, seeing connections, listening closely, and finding the way we can contribute to our communities.”

Professional Background: Civil Engineering

Been at Utility: Since 2006

Utility Profile: Manages wastewater for 1.7 million people in 18 counties and cities in Southeast VA. HRSD has 800 employees.

Previous Position: Director, Department of Public Works, Hampton, VA

Fun Facts:

- Attended a liberal arts school with a small engineering program.
- Worked in redevelopment and housing.
- His utility was awarded the US Water Prize in 2018.

Leadership Style: He’s an “innovator,” many say, “someone who comes up with ideas to address multiple issues.” And he “calls it like he sees it.”

Andy Kricun

Executive Director, Camden County Municipal Utilities Authority (CCMUA), New Jersey



“Collaboration was always important. But to see it in action; that’s my favorite part of the job. We can do more than our core operations.”

Professional Background: Civil Engineering, Chemical Engineering

Been at Utility: Since 1985

Utility Profile: Manages wastewater for 510,000 customers in Camden County. CCMUA has 135 employees.

Previous Position: Chief Engineer, CCMUA

Fun Facts:

- Loves art, history, and literature. Thought about being a liberal arts major.
- Set out to be a chemical engineer; ended up at a wastewater treatment plant.
- Lyrics from Beatles songs are his moral compass: "And in the end, the love you take is equal to the love you make."

Leadership Style: Others say he is "charismatic," "likes to get involved with the community," and "goes beyond his duty."

Jim Lochhead**Chief Executive Officer / Manager,
Denver Water, Colorado**

"Even though we're just a drinking water utility, we're an influencer of things that are happening development-wise in Denver."

Professional Background: Environmental Biology, Law

Been at Utility: Since 2010

Utility Profile: Manages water for 1.4 million people in Denver and over 60 other surrounding utilities. Denver Water has over 1,000 employees.

Previous Position: Executive Director, Colorado Department of Natural Resources

Fun Facts:

- Says establishing credibility is the first step for most things.
- Grew up as a "SoCal" surfer.
- Has ran several marathons and triathlons.

Leadership Style: Others say he's "humble" and "learns by doing."

Michael Mucha**Chief Engineer and Director,
Madison Metropolitan Sewerage
District (MMSD), Wisconsin**

"Our adaptive challenge is to turn skeptics into advocates for a sustainable water future."

Professional Background: Public Administration, Civil Engineering

Been at Utility: Since 2011

Utility Profile: Manages wastewater for 380,000 people in Madison and 26 surrounding cities and communities. MMSD has 104 employees.

Previous Position: Director of Public Works, City of Olympia, WA

Fun Facts:

- Has taught leadership and asset management classes at 3 universities/colleges.
- Says he learns more from his failures than successes.
- Volunteers as a therapy team with his standard poodle, Juneau.

Leadership Style: Others say he "brings a kindness and common-ground approach" to working with others.

James A. (Tony) Parrott**Executive Director, Louisville/
Jefferson County Metropolitan
Sewer District (MSD), Kentucky**

"Affordability has really required us as leaders to think outside the box."

Professional Background: Communications

Been at Utility: Since 2015

Utility Profile: Manages wastewater and stormwater for 850,000 in the Louisville metropolitan area. MSD has 650 employees.

Previous Position: Executive Director, Greater Cincinnati Water Works and Metropolitan Sewer District of Greater Cincinnati

Fun Facts:

- Started out as a frontline utility operator in Ohio and worked his way up.
- Grew up on a farm in Kentucky.
- Connection to nature drew him to work in water.

Leadership Style: Others say Tony is “dependable and measured in his approach.” He “pushes for diverse leadership” and is “a strong leader in equitable water workforce development.”

Kishia Powell

**Commissioner, City of Atlanta
Department of Watershed
Management, Georgia**



“The foundation of every relationship has to be trust. If there is something that I do not know, I don’t dare pretend. I get the best information that’s available so that they can continue to trust.”

Professional Background: Civil Engineering

Been at Utility: Since 2016

Utility Profile: Manages water for 1.2 million people in and surrounding Atlanta, wastewater for 1.8 million people, and stormwater in Atlanta. The department has 1,400+ employees.

Previous Position: Director of Public Works, City of Jackson, MS

Fun Facts:

- Worked in the private sector in London.
- A photo of Frank Lloyd Wright’s “Falling Water” inspired her to study engineering.
- Dedicated dog mom to Lord Louis Leo London Wyndor.

Leadership Style: Often described as “very team-focused.” Kishia is “dedicated and has a sense of humility,” many say.

Kathryn Sorensen

**Director, City of Phoenix Water
Services Department, Arizona**



“What I’ve learned is that effective communication needs to be personal, organic. And the best advice I’ve gotten is that the degree of my success would be measured in the number of questions I ask.”

Professional Background: Resource Economics

Years at Utility: Since 2013

Utility Profile: Manages water for 1.6 million and wastewater for 2.7 million people in the Phoenix metropolitan area. Phoenix Water has 1,500 employees.

Previous Position: Director, City of Mesa Water Resources Department

Fun Facts:

- Grows her own chili peppers.
- Has two children and a dog.
- Chose a profession in water because she grew up in the desert.

Leadership Style: Others say Kathryn is an “articulate economist with good political skills.” She “has good perspective and is collaborative.”

SIX ESSENTIAL CAPACITIES

FOR ONE WATER CHANGE LEADERSHIP

The 10 One Water changemakers we interviewed face varied water-related challenges and are pursuing diverse management approaches in their utilities and communities. Yet, through our conversations with these changemakers, several common capacities emerged. In this section, we summarize those six capacities and present them as a replicable framework for One Water change leadership.

At the US Water Alliance, we believe that these six capacities are what we all need to guide, support, and transform the sector to One Water. We intentionally utilize the word **capacity** to demonstrate a leader's knack for understanding One Water and operationalizing it into practice. These capacities represent abilities that can be learned and grown. They are not inherent personality traits nor competencies of a certain education or professional certification. Rather, **we define capacity as the ability to use collective knowledge, skills, and attitudes to enable One Water management.**

While we surfaced these capacities by talking to utility executives, we see them showing up in members across the US Water Alliance network. All water stakeholders can cultivate these capacities within themselves and their organizations. Regardless of position, title, organization, or sector, everyone has a role to play in the transformation to One Water.

This section is organized into six capacities. For each capacity, we include:

- A brief description;
- Three key elements of each capacity;
- Leadership advice for One Water practitioners; and
- A story demonstrating the capacity in action.



SET THE VISION

14

Embed a passion for One Water in the utility's vision and plans.

SHAPE THE CULTURE

20

Cultivate a "One Water way of doing things" in the hearts, minds, and habits of employees.

FOSTER POSSIBILITY THINKING

26

Challenge assumptions and reframe problems to stimulate new One Water ways of thinking.

ENABLE INNOVATION

32

Create an environment that encourages One Water experimentation and outside-the-box solutions.

BUILD TRUST AND COLLABORATE

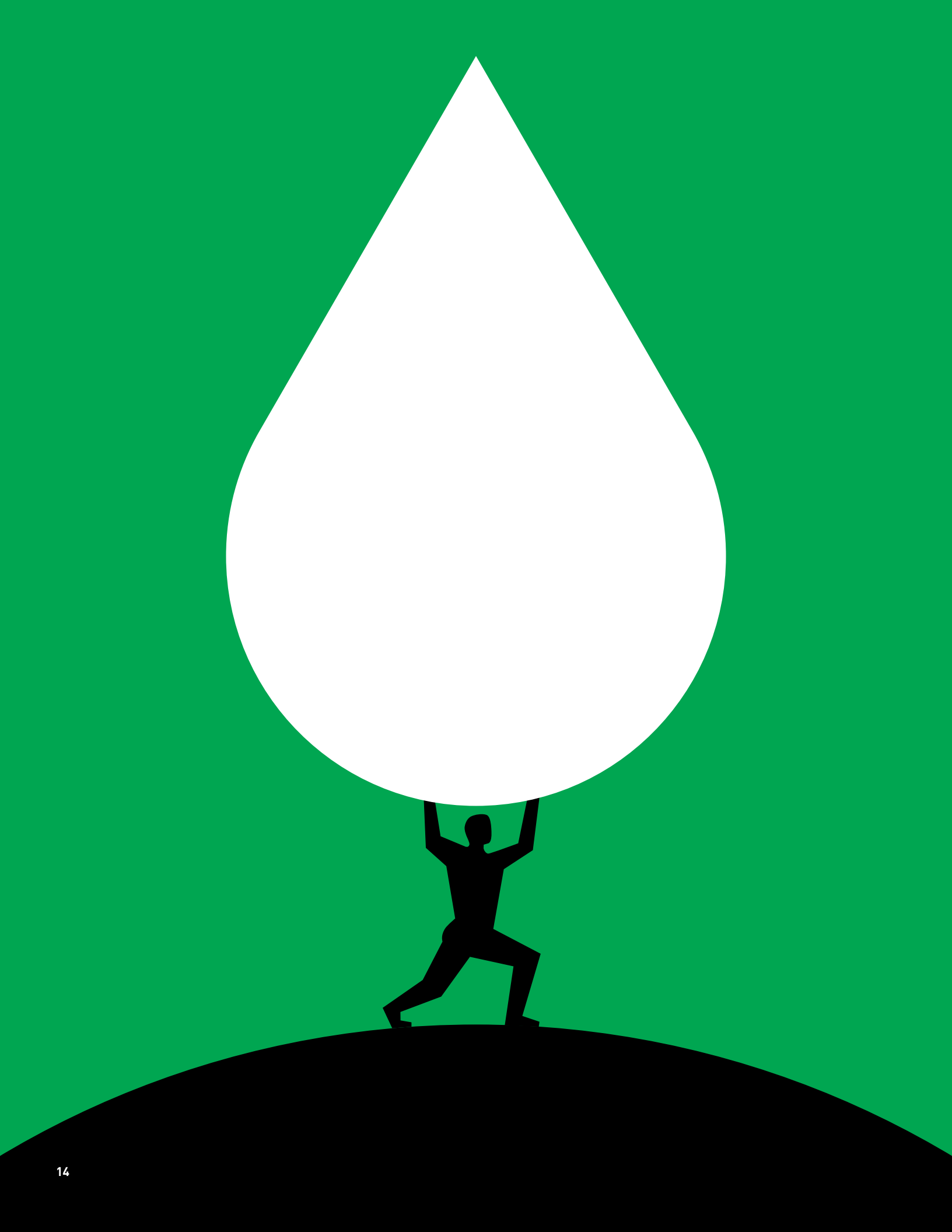
38

Develop dependable "win-win" relationships to optimize One Water solutions.

ADAPT AND LEARN

44

Adjust one's leadership approach to meet current and future challenges and opportunities.





SET THE VISION

Embed a passion for One Water in the utility's vision and plans.

SET THE VISION

TO SET THE VISION:

- **Commit to One Water transformation.**
- **Reposition the utility as an anchor institution and environmental steward.**
- **Inspire and include others.**

One Water leaders hold and convey a vision for water utilities that deliver on their historic mandate of providing safe and reliable water service, while recognizing that the utility can play a more expansive and positive role in the community and watershed. They also understand the importance of operating with a systems mindset, recognizing the interplay among all aspects of the water cycle. Each of the 10 changemakers say that their vision is grounded in a foundation of strong utility management skills, but they also think beyond the fence line and view the utility as an anchor institution and environmental steward. Cultivating diversity and inclusion, within and outside the organization, is essential to this process. This section describes how changemakers are shaping a One Water vision for their organizations.

Commit to One Water transformation.

In the transformation to One Water, leadership starts with making a personal and professional commitment to One Water. Each of the 10 changemakers we interviewed described their passion for holistic, inclusive, and sustainable water management. Each uses that passion to transform the way they carry out their jobs and lead their organizations.

One Water leaders care deeply about the utility's traditional mandate and meeting or exceeding core performance goals like safety, reliability, and financial capability. "Our Golden Rule here is to protect the product we put out. It has to be safe," emphasizes Atlanta's Kishia Powell. Kathryn Sorensen of Phoenix Water adds: "You have to develop the skills necessary to understand the physical, legal, and financial operation of the utility. Those three things are so interconnected that if you don't understand them, you're going to miss the big picture." One Water leaders master these skills and use them to stretch beyond what a utility traditionally does.

Committing to One Water often arises from a personal mission and moral sense. Louisville's Tony Parrott asks: "What ability do water and wastewater utilities have to shape the communities that they live in? What kind of community do you envision for the future?" Or it may surface from professional experience and analysis. In Seattle, Mami Hara notes, "The kinds of threats in our environment now require broad stewardship among everybody in our community. We have to evolve methodologies for greater collaboration, sharing, and distribution of responsibilities." Denver's Jim Lochhead cites additional drivers that fuel his choice to involve others and his own commitment to One Water: "With population growth, an environmental ethic, and the current regulatory structure, we're in a new reality that requires a new way of doing business."

Choosing One Water underscores the need and urgency for change, and for an expanded way of thinking and operating. Setting this vision is a critical first step toward aligning everyone in the utility around a shared understanding and purpose. It lays the groundwork for a profound, sustained shift in utility culture, and in the way the community understands and interacts with the utility.

Reposition the utility as an anchor institution and an environmental steward.

One Water leaders see the role of the utility as much more than simply providing water services. Utilities don't just convey, pump, and treat water; they manage a resource and provide services that impact every other aspect of society. Leaders see utility operations in relationship to the community, the economy, and the environment.

For One Water changemakers, the utility is an anchor institution. Powell has an enduring commitment to community service; as she says, "we want to be an anchor institution, leaving a legacy of meaningful work that has moved the needle on things that matter most to the residents in the community we serve."

As anchor institutions, utilities are rooted in the communities in which they operate. Hara illustrates this with her vision for a *community-centered utility*: "The essence of the idea is that the infrastructure and assets we manage belong to our community," she explains. "Describing ourselves this way allowed me to talk about what the possibilities are." Hara and her team developed an accompanying framework for performance and outcomes of this vision that includes affordability and accountability; risk and resilience; and equity and empowerment. "You have to manage around these enduring elements," she says. "No matter what, those are essential to operations, planning, and engagement." Seattle Public Utilities is now weaving this framework into its strategic plan. It's about more than just delivering a One Water project. The framework determines *how* these projects take place and brings a sense of permanence to the utility's transformation to this approach.

Utilities are also environmental stewards. As Camden's Andy Kricun puts it, "Working for an environmental entity like the wastewater utility gives you an opportunity to serve the public and save the planet." Leaders model this mindset and embed One Water thinking into the utility's formal plans. In Northeast Ohio, Kyle Dreyfuss-Wells emphasizes the sewer district's connection to natural systems: "We have a watershed state of mind. There's a lot of cross-pollination because our staff understand that, for instance, each combined sewer overflow the district deals with is not just an overflow. It is part of a larger watershed."

Visioning solutions beyond the traditional mandate or engineering approach requires a balance of mastering what is known and imagining what could be. As they develop One Water projects, leaders have to make sure that services remain affordable and accountable. Reaching beyond, Kricun has focused on increasing the efficiency of Camden's wastewater facilities to reduce costs, and he's been successful at holding down rates. "This benefits ratepayers," he says, "but it also allows us to do more community and environmental work, to go beyond the permit's requirements."

Lochhead further explains the various layers of cross-pollination influencing Denver Water. "We don't just deliver water," he says. "We operate in a broader context. We're dependent on healthy watersheds and aquatic systems. Our water supply and quality are affected by the regulatory structures of the Clean Water Act, the Endangered Species Act, and a host of other laws. And we have to meet the challenges of a growing population and the implications of climate change." Lochhead's vision for Denver Water is one that recognizes its connections to communities and the environment of the Colorado and South Platte river basins. "We're providing life to the City of Denver and surrounding suburbs. We're an important component of economic development in the region," he notes.

Repositioning utilities for the crucial role they play in communities and the environment is a cornerstone of One Water that welcomes and nurtures a broader perspective. At some point in the change process, leaders formalize their vision-development work into strategic planning at the utility—a way of institutionalizing the One Water vision. This can only happen when others are included in the transformative process. In addition, leaders must have the willingness to be accessible and to communicate their vision. This can allow a change in how the utility is viewed both internally and externally.

Inspire and include others.

Initiating an inclusive process that generates buy-in internally and externally for the organization is critical to carrying out a One Water vision. “One Water highlights the big, difficult challenges in front of us,” says Madison’s Michael Mucha. “Leadership is about mobilizing people to make progress on these challenges.” For the change-makers, the value of diversity and inclusion in the process is that the customers they serve are diverse—culturally, economically, politically. With a more diverse set of voices in the visioning and implementing of a One Water approach, utilities can better understand how to ensure the water services they provide are culturally relevant and meet community needs.

Internally, leaders invite employees to co-create the vision for the utility. They engage utility staff in diverse, deep ways that generate ideas and commitment for One Water. “I see my primary role here as supporting staff,” explains Mucha. “My role is to facilitate the dialogue to shape our pathway to the future *together*.” This can be far more complex and requires more creativity than a siloed utility’s typical planning. The 10 changemakers reiterated that One Water is a rapidly evolving field and there aren’t a lot of templates from which to draw. Yet many are finding ways to generate support by involving others in the One Water visioning process.

This sort of change process takes time—even several years—to gain traction. “The difference comes with having a greater vision,” says Powell, “but it takes time to get to that place.” When she became Commissioner of Atlanta’s Department of Watershed Management, her top priority was clear. “The former mayor said very plainly: ‘Water management represents 45 percent of the negative perceptions that people have with the City of Atlanta and that’s not acceptable. I brought you here to change it.’” Powell’s strategy was to shift the utility to a One Water approach. She recognized that—from safe drinking water to tertiary treatment of wastewater—at the end of the day, all services are about protecting the same resource. But making this shift required the involvement of others in the utility, so she guided the organization in developing a strategic One Water vision to leverage resources and manage water as one system in Atlanta. Where services and work crews were once siloed, the utility is evolving to be “all one team serving the people of Atlanta,” says Powell.

Externally, leaders recognize that a One Water utility plays many crucial roles in a community’s well-being and depends on a complex web of relationships. For example, Mucha says his utility used to understand itself in traditional terms: “We design, build, and construct infrastructure to treat wastewater. This core work will remain foundational to what we do every day. But with mounting challenges we have realized that we cannot solely engineer our way toward improved environmental and social outcomes. We need to work closely with diverse partners to succeed.”

Leadership Advice

- **Hold your ego in check.** One Water succeeds only if it is inclusive. “Don’t make it about yourself,” cautions Mami Hara. “Part of modeling a new vision means that it’s not about my vision as a leader, it’s about us. It’s our vision as a team, as a community.”
- **Be persistent and improvise.** Embracing an inclusive and innovative vision means you can’t figure out everything ahead of time. “You’ve got to be flexible,” says Tony Parrott, “because along the way your vision and mission may have to be tweaked. Your outcomes may not be what you thought.” With its emphasis on culture change and inclusivity, One Water transformation inevitably involves hurdles. “It’s a tough path to go down,” notes Parrott. “You need the will and the courage to see it through.”
- **Instill confidence in others at the utility to try new things.** To be a long-term change agent, you have to help others step outside the box. “I’m a natural risk taker. I hope to empower people just by example,” says Kathryn Sorensen.

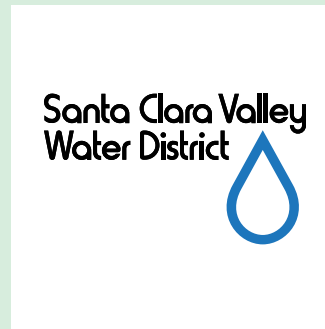
CAPACITY IN ACTION

Santa Clara's One Water Vision: A Utility Logo and a Three-Legged Stool

When Santa Clara Valley Water District—which manages drinking water, wastewater, and flood protection—rebranded itself as “Valley Water,” its emerging One Water vision was a big driver of the change. “‘Valley Water’ better captured our One Water reality,” says Norma Camacho. “We are managing water for the Silicon Valley: flood protection, groundwater, imported water, storm-water—all these waters that you see, these are the things we manage.” As part of the rebranding, the district changed its logo.

The district’s logo used to be a blue drop. “It was nice, but it was visually only about water supply,” Camacho says. “Now we have a drop that is both green and blue with a slash in the middle of it. On top, the green represents the watershed and the surrounding habitat. The slash across the drip represents creeks and channels that we modify for flood protection—but in a way that we maintain or encourage habitats. The blue below is the protection of our groundwater basin. The logo conveys all of the three major functions that we provide.”

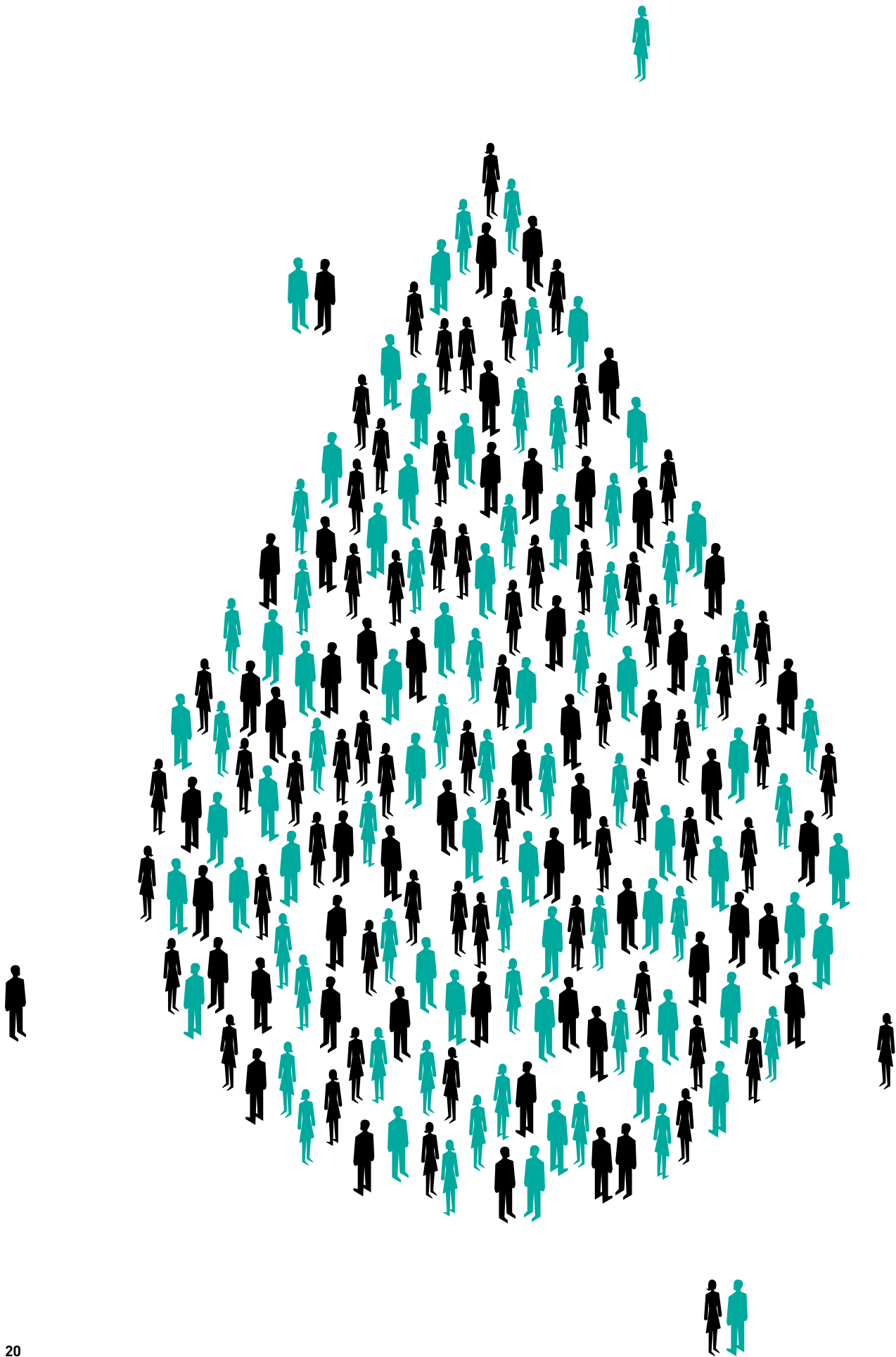
The logo wasn’t just for external audiences; it was for all employees, too. “Because water supply was historically so important,” Camacho says, “there always appears to be an internal water hierarchy: supply is number one, flood protection is number two, and number three is environmental stewardship. Culturally within the organization, I’m saying, no, all three of those functions are equal legs of the stool that we all sit on. All functions must be performed using an integrated approach.”



Previous logo



New logo





SHAPE THE CULTURE

Cultivate a “One Water way of doing things” in the hearts, minds, and habits of employees.

SHAPE THE CULTURE

TO SHAPE CULTURE:

- Understand the power of organizational culture to shape a utility.
- Promote a “we’re in it together” mindset.
- See the team as the leader.

Ideally, One Water is a complete transformation that endures beyond a single project or leader. To institutionalize and operationalize One Water as a long-term approach the underlying culture of an organization must shift. By *culture* we mean the minds, hearts, and habits—the way people think, what they value, and their everyday practices and policies—in sum, “the way we do things around here.” As in any organization, everything a utility executive does may affect the organization’s culture. Leaders of any kind set the tone and provide examples—unconscious or not—about what ideas, relationships, and behaviors are encouraged and acceptable within the organization. This section covers how leaders intentionally model, live, and promote a One Water culture.

Understand the power of organizational culture to shape a utility.

According to One Water leaders, it’s critically important to first know the utility’s prevailing culture and how deeply this culture impacts the ways in which people think and operate. Utility culture evolved around the historical mandates that water and wastewater infrastructure were designed to achieve: to provide a product and service to customers and comply with regulations. An organization’s culture manifests in many small, everyday ways that many people are not even aware of. This is true for utilities of all sizes as well as other institutions. One cannot overestimate the importance of culture change to ensure long-term transformation. As Seattle’s Mami Hara puts it, “there’s a little saying that ‘culture eats strategy.’” The changemakers we interviewed are all using their vision to identify the culture they desire for their team, the culture needed to move their utilities to One Water.

Shaping a One Water culture in a utility—or any other organization—is tricky. Leaders must be clear about *what* it is they want to change about the organization’s existing culture and why. For instance, Madison’s Michael Mucha explains the importance of promoting creativity and innovation at MMSD: “I look for people who are willing to take risks and try new things and fail,” he says. One Water culture is fueled by new thinking, new relationships, and new practices. It may involve changing hiring practices to diversify the workforce, building new transparency and accountability mechanisms, and uplifting inclusivity from within and outside the organization.

Transforming the utility’s structures and processes into an innovative ecosystem equips the organization to manage the complexity of today’s water challenges and collaborate with stakeholders and their many perspectives. In short, it connects the dots between water management and thriving, resilient communities. By establishing this culture, the utility shifts toward more inclusive and equitable operations in the present, and in planning for the future.

Diversity in management positions is an important example. “Traditionally, the industry has been dominated by Caucasians over my career. But when we think about how big water infrastructure is and the places technology and innovation are coming from, you see diversity,” Tony Parrott of Louisville says. “In America, the largest population centers are served by utilities where demographics

are trending more towards minorities than ever before. And suddenly, I bring a different strategic vision to the table as an African American leader. Twenty years ago, this was not part of the conversation.” Building a diverse staff demonstrates a utility culture that is both competent and visionary, but also one that resonates with the diverse communities that utilities serve.

Leaders keep in mind some key indicators of change: shifts in communication, relationships, and planning approaches. In Denver, Jim Lochhead brought in outside consultants to help his executive team build trust with him and each other. He wanted the team to “be able to have healthy conflict, be committed to each other, have accountability to each other and team norms for interacting, and be driven by the results of the organization. Santa Clara’s Norma Camacho also sees a change at her organization: “When I look at the culture that existed here seven years ago, we’ve made huge strides. Our flood folks and groundwater folks are collaborating. This wasn’t happening before.”

Leaders also work to move the external culture toward One Water. This gives One Water change staying power, says Camden’s Andy Kricun: “If you don’t change the culture—not just in the organization, but in the community and among elected officials as well—the time you’re doing well will only be as long as your leadership lasts. But you want the positive difference to go on after you’ve left.”

Promote a “we’re in it together” mindset.

One Water leadership brings people together to work on common goals. Leaders work to embed inclusion in how the utility makes decisions. “One of the organizational values that is most important to me—and that I emphasize continually—is participatory decision-making at all levels of the organization,” says Kathryn Sorensen in Phoenix. “I don’t think we are well served by traditional hierarchy. I prefer when we have robust, even difficult, conversations about how we should do things, with people at the table who represent very different perspectives.”

In Hampton Roads, Ted Henifin structures the utility’s work to embrace diversity and function through a participatory process. Each work center at Hampton Roads Sanitation District (HRSD) regularly brainstorms about things it could do differently. “Then we open it up for

employees to think about anything for the overall organization: what else could be different or better or changed. We take these lists to our senior leadership team and go through it, one at a time. We provide a response back to the whole organization. It helps people see that we will consider anything. This inclusionary process provides us with great ideas and ensures a good reason to say if we can’t do something and why.”

Equity and inclusion—both inside the utility and in how it relates to the community—is essential. “Ensuring equity and engagement are fundamental to our community-centered approach,” says Hara. “You have to manage around affordability while ensuring that everybody benefits and can thrive in place.”

Creating an inclusive utility culture means making sure that utility staff reflect the communities they serve. Promoting water sector career paths for vulnerable communities is a key strategy in making water management more equitable and improving communication with communities. Recognizing this, Northeast Ohio Regional Sewer District’s (NEORS) Good Neighbor Ambassador Program hires unemployed and underemployed individuals in neighborhoods impacted by Sewer District construction projects to conduct community outreach. In Camden, the PowerCorps program provides pre-employment training for at-risk young adults, in which they work on maintenance for green infrastructure projects that reduce combined sewer overflows in the city. PowerCorps workers receive life skills coaching, full pay with benefits, and job placement assistance when their six-month training program ends. Many One Water leaders are also incorporating internal racial equity training, recognizing that naming and knowing biases creates a culture where utilities can address them in their own practices.

See the team as the leader.

The 10 changemakers told us again and again, in a One Water utility, the *team is the leader*. The utility team has to exemplify the desired inclusion and integration of One Water culture. This may need to be worked on from a range of technical and social expertise, to diverse genders, race, and beliefs.

A critical culture-changing step is the development of a senior leadership team that embodies the desired One Water culture—in its diversity, structure, and behaviors. The 10 changemakers actively brought multiple perspectives onto their leadership teams, as they very much understood their successes and achievements as part of a team—not something they did on their own. One key to building a highly diverse team of intelligent managers, says Atlanta’s Kisha Powell, is to be comfortable with all the smarts in the room. “Some people like to build teams where they have folks that don’t outshine them. They feel that because they’re managing the utility, they have to be the smartest person in the room, and everybody is looking to them for the answers. I’m not afraid to have people in the room who know more than me. In fact, I require it.”

“I started building an executive team that could lead this organization with me, because I couldn’t do it alone,” says Mucha. “I’m not smart enough. I needed experts around me who saw things in different ways: professional engineers, but also expertise in biology, psychology, communications, and economics. They bring different skill sets and viewpoints to solving those problems. The result is an executive team with very diverse knowledge levels and personalities that generate a dynamic, problem-solving environment.”

Encouraging professional development is also a critical focus, and it’s important to let people carve non-traditional paths. Henifin has steered his leadership team away from the usual career paths within utilities. His talent management director was a chemist in the utility for three decades, ultimately leading the laboratory. “The fact that she brings 30 years of operational experience into talent management, it’s been wonderful,” he says. The director of utility operations—overseeing 500 employees and a \$100-million-a-year budget—had been his finance director, someone looking for a new challenge. “The job at that level is about people and money, not just about technical things.” Henifin moved an engineer

who just finished his master’s degree in business administration into the finance job. “People in our organization can now look and say, there’s not a definitive straight career path. You’re not painted into a corner.”

Leadership Advice

- **Protect the culture you want.** Sometimes an organization’s old culture resists new ideas and behaviors. Norma Camacho says she defends new ideas from a culture of naysaying with a culture of exploration. “As new ideas arise, we have to stop focusing on the things that will kill it, why it’s not good. Create a culture open to brainstorming, before you start talking about the pros and cons.”
- **Put in the time needed to build positive relationships.** So much of One Water rests on collaboration and requires personal effort to build relationships. “I take the time to be seen and talk personally with people, so they know I’m not scary,” explains Kathryn Sorensen. “We have 1,500 employees and we’re running 24/7 over about 11 or 12 different facilities. But I just make the personal effort to get out there and meet as many employees as I can.”
- **Celebrate success and acknowledge others.** Establishing a One Water culture requires long-term systemic change. Leaders stressed the importance of celebration as part of the organization’s culture and advised “celebrate success along the way.” When the pilot for an especially impressive wastewater treatment innovation went online, Ted Henifin invited every utility employee to visit the treatment plant. “We scheduled 25 different times people could sign up and I personally hosted them. We’d have technical staff explain the technical aspects. That involvement helped them see the bigger picture.” The suggestion for this educational celebration had come from a lab employee.

CAPACITY IN ACTION

Building a One Water Culture in Louisville's Utilities

In Louisville, KY, water resources and services are managed by two major entities. Louisville Water provides drinking water for around one million people in the city and surrounding counties. The Louisville/Jefferson County Metropolitan Sewer District (MSD) manages wastewater and stormwater for 250,000 in the metropolitan area. While they are two separate utilities, they are building a One Water culture of collaboration. In fact, MSD and Louisville Water are expanding and deepening the joint management of key functions, which is a major shift in culture and practice. State law prevents the two entities from merging, but both of their governing boards are appointed by the city's mayor, who has been enthusiastic about collaboration.

The collaboration began around services and grew to include information technology (IT) and other internal functions. "If you can get to a shared platform for your information systems, that is a big leap," Tony Parrott explains. "I have also talked about a shared human resources platform, because you've got to have similar policies. Really, when you are thinking about integrating, it's about people, the human capital. You've got to deal with that. We have made a lot of progress in the area of shared services and how to partner in regionalization efforts," he says. The entities established a joint management group over IT, procurement, fleet management, customer service, and communications. Now they are moving into developing innovations together and creating new business lines to generate revenue for both enterprises. "We just appointed a chief innovation officer who's leading the efforts of *both* entities. We're joined at the hip now when it comes to innovation."

With a total of 1,300 employees, almost evenly divided between the two organizations, the collaboration has advanced despite significant barriers. "The culture is so different between the water company and the sewer entity," Parrott says. "The culture in those silos is the biggest challenge and the hardest thing any leader would have to address—breaking down those barriers that have been there for years."

A key to accomplishing this, he says, "is to develop a message that's going to resonate and can be used from top to bottom in both entities. We came up with a very succinct mission and vision statement about what we were doing and why we were doing it. Now, it's evolved to where everybody fully understands that it's okay. It's about a partnership to not only bring value to our organizations, but to bring value to the community and the industry we work in."





FOSTER POSSIBILITY THINKING

Challenge assumptions and reframe problems to stimulate new One Water ways of thinking.

FOSTER POSSIBILITY THINKING

TO FOSTER POSSIBILITY THINKING:

- Identify the “right” problem to solve.
- Craft multi-benefit solutions through inquiry.
- Share power to address community dimensions and leverage strengths.

One Water leaders actively question, brainstorm, and create space for dialogue across their organization. This can involve encouraging ways of thinking that utility employees have not been trained in or used before. For new thinking to emerge, One Water leaders inquire about the assumptions that may underlie utility management decisions and actively reframe problems that are presented to them as opportunities to generate alternative solutions. They seek to integrate technical expertise in the utility with broader community considerations. This section explores how One Water leaders foster possibility thinking in themselves and their organizations.

Identify the “right” problem to solve.

One Water leaders introduce questions, probe ideas, make observations, and initiate experiments that encourage possibility thinking. Hampton Roads’ Ted Henifin asks a lot of questions. “I’ll often say, ‘why can’t we do this?’ or ‘explain it to me.’ Questioning encourages folks to think beyond the status quo,” he says. This can uncover underlying issues or reframe the problem a utility is trying to solve.

In fact, the 10 changemakers told us that the starting point of their inquiries is often focused on defining *what* problem needs to be solved. A broader look creates productive team conversations. “Sometimes the right problem to solve is different than initially thought;” Atlanta’s Kishia Powell says, “it may be more complex or have roots upstream.” Kyle Dreyfuss-Wells in Ohio agrees: “You may also be able to work upstream of a downstream problem. This can make the solution more cost effective and impactful.”

Dialogue and questioning can lead the group to a different, often better, solution. In Louisville, “our approach is to ask, how can we deal with solutions at the source instead of in-the-pipe solutions?” says Tony Parrott, “How can we get in front of it at the source and bring a solution that is going to spark revitalization and economic development?” Flash flooding has increased from more intense rainfall events, so the city has purchased hundreds of flood-prone homes to mitigate repeated flooding. The city is also developing plans for new parks and community amenities that are designed to safely and effectively cope with floodwaters. The utility is implementing a \$4.3 billion Critical Repair and Reinvestment Plan to address outdated pump stations along with other flood protection and wastewater infrastructure needs.

For Northeast Ohio, climate change in the Great Lakes region also poses significant challenges. A key issue is how to better coordinate with transportation systems, land policies, and communities; managing increased rainfall stresses an aging wastewater system, and a customer base that is already paying high rates. Identifying the complexity of this problem allowed the utility to think of a more holistic solution. Each watershed’s Stormwater Master Plan shifted from *moving* stormwater from one community to the next, to *managing* it. This meant moving structures out of harm’s way; “using forward-thinking

approaches—floodplain restoration, wetland and headwater stream protection, and working with the communities on zoning ordinances so that planning efforts protect these resources,” Dreyfuss-Wells explains, “This ensures ratepayers get the most out of every dollar they spend.”

Craft multi-benefit solutions through inquiry.

Utility professionals are trained to look at data or a specific system’s point of failure when addressing a problem. Inquiry and dialogue with others brings a diversity of perspectives; this aligns technical considerations with social, cultural, and policy aspects to achieve greater benefits.

Capital planning sessions are one area where possibility thinking is particularly helpful, the changemakers informed us. Jim Lochhead in Denver explains: “We have developed a culture for our capital planning where we first ask ourselves if we even need this project. We relook at the asset or set of assets and put it into our scenario planning process. Then we determine what’s needed; maybe we don’t need to replace it in same size, scale, or scope. We focus on incrementalism, modularity, and flexibility.” This questioning and brainstorming new ideas have changed the way capital improvement projects are assessed and approved at Denver Water. Their scenario planning process now considers the connected impacts between projects and decisions on water management within a broader context, with a vision of what circumstances might be like 50 years from now.

Discussions among multiple branches within a department, or even between utilities, foster new strategies and solutions. Seattle’s Mami Hara noticed that capital projects were sometimes separated from each other. “There was inconsistent understanding about how to integrate them into the community or with each other in ways that maximize their value as infrastructure and assets to the community. For example, at first we were thinking, okay we have a pump station, that’s one project. Gosh, we also must convey the stormwater to that plant, so that’s another project. And here’s another project for a water quality plant for that stormwater. Then there’s the acquisition of land for all this. People were doing their best, but it was an example of siloing even within one line of business.” Bringing utility staff on each of these projects together

allowed them to brainstorm solutions that benefit multiple areas and community needs, supporting the larger vision of a community-centered utility.

Possibility thinking reaches beyond the technical data to consider a spectrum of potential solutions. This may shift the utility’s expected outcomes of a project. Dreyfuss-Wells explains: “The sewer district has ingrained a One Water approach by solving multiple problems at once. We think: we’re not just opening up a street and putting in a new pipe. As we do this kind of work, we’re also interacting with the neighborhood and other utilities. And we’re representing the ratepayers.” One Water leaders step outside the box. “What are the possibilities to maximize benefits?” asks Dreyfuss-Wells. “What else can we do as we dig into the street for a pipe? Add some public art or greening? Can we integrate this with, for instance, the big park that the Trust for Public Lands is planning? Can we adjust our work schedule to minimize disruption for the community? Our folks are very open to those conversations.”

Possibility thinking also helps utilities connect with partners. Valley Water’s Norma Camacho engages with many utilities throughout Santa Clara County. “We are stepping back to think, who is your constituent? Your constituent and my constituent are the same person. This is *One Water* after all. The same water is being used by all of our constituents, and we need to work together closely. We can’t make it difficult for each other. We need to progress together.” Camacho and her team have become more effective in water supply planning by identifying common ground with others, then discussing possible solutions; for example, Valley Water is coordinating work at the county level with regional groups such as the Bay Area Water Agencies Coalition.

Share power to address community dimensions and leverage strengths.

The 10 changemakers reiterated: you have to understand the community dimensions of a water project, and work with the community to address any potential impacts. Utilities are on the frontline of public health protection, which involves key technical considerations. But every project must also be implemented within a social context and recognize that it may have unintended consequences.

Possibility thinking helps probe impacts up front and provides space to leverage community input and action to prevent them. “We previously focused mostly on the technical expertise of a project, in terms of pipe sizes, water quality parameters, pump settings, etc.” Kathryn Sorensen of Phoenix asserts. “Nowadays, our work and the expertise needed is much broader. It also encompasses social and environmental justice issues. More stakeholders at the table represent much broader perspectives. Operating in this type of environment requires a broad vision for your utility and where it needs to go.”

Phoenix Water’s long-term strategy for water supply and security is a strong example. Under Sorensen’s leadership, the utility has focused on how their existing relationship with the Gila River Indian Community might help explore community dimensions and strategies for water management projects. This approach moves beyond the technical and legal components—from treatment and infrastructure, to water allocation and sharing agreements on the Colorado River—to consider the various social contexts in which Phoenix Water operates. With the Gila, the utility found “common ground in terms of water resource management needs,” says Sorensen. This brought forth other possible solutions to water supply and security issues. In fact, strengthening that relationship led to creative multi-benefit solutions to conserve water in Lake Mead, bank water in underground aquifers, and restore the sacred Gila River that flows through their land. The utility and community further established wetland interpretative hiking trails, trash pick-ups, and bald eagle protection projects.

Shared decision-making with stakeholders has many benefits and applications. This is especially necessary when tackling a growing social and economic problem. New thinking can help address some of the tensions and stakeholder opposition on the thorniest issues. “Affordability really requires us leaders to think outside the box,” Parrott says. “Everybody sees that there are risks out there. But no one wants to pay for it. As a leader, we’ve got to shape the picture so people understand they’re making a community investment, and not necessarily an increase in their monthly water and sewer bill.”

From rates and shutoffs to long-term infrastructure investments, One Water leaders engage in dialogue so they can connect the dots and co-develop solutions. “This process is challenging—it can mean confronting historical harms and overcoming a lack of trust on all sides,” Parrott notes.

He and other changemakers are participating in the US Water Alliance’s Water Equity Taskforce, a network of seven cities that are embracing the goals of One Water to ensure that water management benefits all communities. In each Taskforce city, utilities, community-based organizations, environmental groups, and other local stakeholders collaborate to institutionalize more equitable practices and provide inclusive services. “Through this process, utilities and communities can discover and work together towards shared goals,” Parrott remarks.

NEORS is part of Cleveland’s Water Equity Taskforce, helping to develop a Water Champions program to educate and forge bonds with residents from vulnerable communities in water management-related decisions. The program is designed with listening sessions to garner public input for how projects that the utility must undertake can most benefit residents. The Taskforce modeled the program on the city’s Climate Ambassadors program, leveraging existing success from other city agencies.

Leadership Advice

- **Be endlessly curious about the why, what, and how of things.** One Water leaders encourage and appreciate this quality in others. “The best advice I ever got in my career was from a person who told me that the degree of my success would be measured by the number of questions I asked. I believe very profoundly that my job is to question: Why do we do it that way? Is there a better way to do it? Are there solutions that can be found that benefit multiple stakeholders instead of just one?” says Kathryn Sorensen.
- **Let new ideas or understanding change your plans.** Understanding the technical and social complexities of water solutions can fuel a thoughtful, inclusive decision-making process. “Once the door is open to have conversations about how the project impacts the community,” says Kyle Dreyfuss-Wells, you can strategize on multi-benefit solutions with the community.
- **Think beyond the permit.** One Water is about the possibility of doing more. What would you do for your community and the environment if you were not beholden to regulations and financial constraints? “Think beyond the permit. Try to do as much good as possible,” says Andy Kricun.

CAPACITY IN ACTION

Connecting the Dots for SWIFT Innovation

At full implementation, Hampton Roads' award-winning water innovation—the Sustainable Water Initiative for Tomorrow (SWIFT)—will be one of the world's largest groundwater recharge programs, delivering more than 100 million gallons per day (MGD) of water to the Potomac aquifer. This project will protect the region's environment, enhance the sustainability of the area's long-term groundwater supply, and address sea level rise, saltwater intrusion, and restoration of the Chesapeake Bay. The effort was awarded the US Water Prize in 2018.

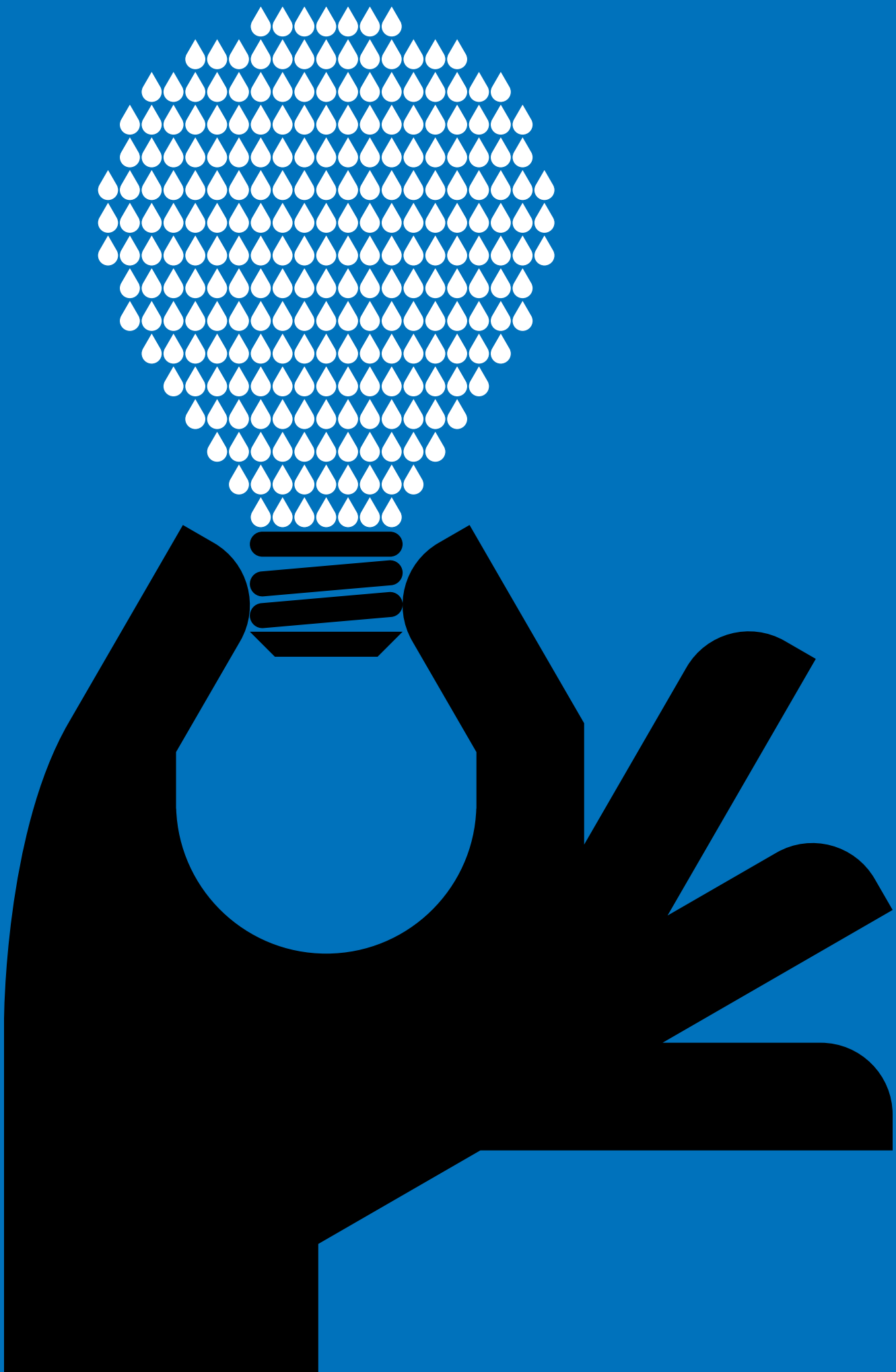
SWIFT did not arrive as a sudden inspiration. It grew slowly out of leadership, meetings, and conversations. Then more meetings and more conversations. "Exposure to those conversations and absorbing bits and pieces built a foundation to start thinking differently," recalls Ted Henifin. New thinking emerged, leading to one of the nation's most innovative large-scale water treatment projects that generates an unprecedented combination of beneficial outcomes for a wastewater utility.

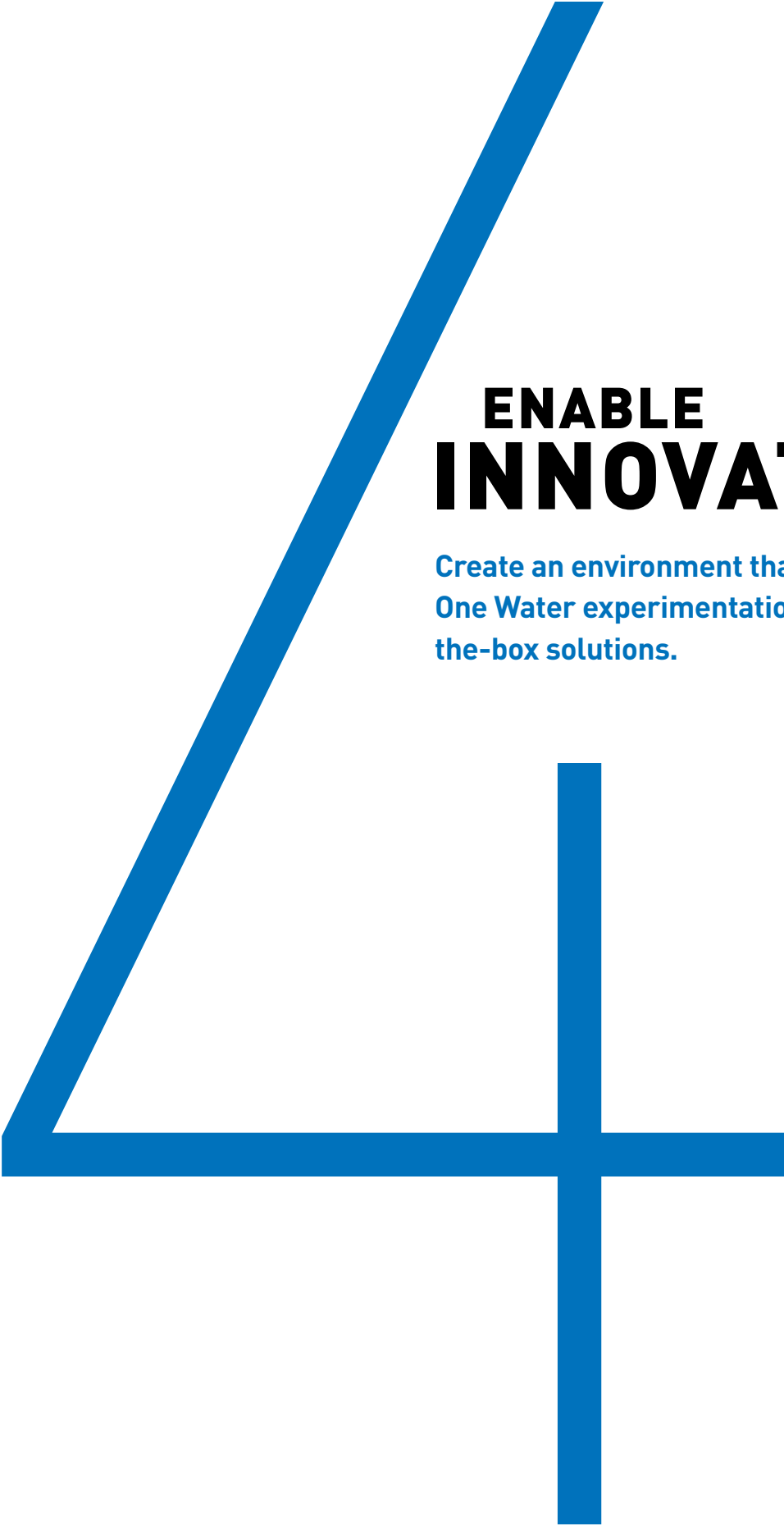
Showing up at all external and regional meetings was an unusual act of leadership. Water utility directors in the region got together regularly for years. "Before I got to the sanitation district, we weren't regularly at that table," Henifin says. Most discussion was about drinking water, groundwater, or stormwater, rarely about sewage. But Henifin had a different purpose in participating. He built relationships with the rest of the region's water management system. He was listening to the *whole* system, not just his utility's silo. "Being at the table with other water conversations set the stage for us to start connecting some dots that we wouldn't have otherwise."

Dot #1: Henifin's team was doing scenario planning for the utility. "One constant was regulatory change, something we couldn't control and we're constantly reacting to," he says. "We thought maybe we should jump forward and take our water all the way to drinking water quality. Then we might be able to exert some control over our destiny from a regulatory perspective. If we do that, we need to find a better use for the water than discharging it in our local waterways."

Dot #2: "At the same time," Henifin says, "the state was getting serious about taking measures on groundwater. Sitting in these utility meetings exposed us to that. Folks were talking about groundwater permits getting cut."

Connecting the Dots: "That's when the light went on," Henifin recalls. "If we make drinking water, why not put it back in the ground where it can solve a lot of these other problems? It was building long-term relationships, listening, figuring out where our connections might be, and finding a way we can contribute."





ENABLE INNOVATION

Create an environment that encourages
One Water experimentation and outside-
the-box solutions.

ENABLE INNOVATION

TO ENABLE INNOVATION:

- **Design work structures that nurture innovation.**
- **Take measured risks as part of the innovation process.**
- **Celebrate solutions that reach for One Water goals.**

One Water leaders don't demand innovation, they nurture it—by providing room and resources to take risks, make mistakes, and move forward. Generating One Water ideas is not enough; ideas must be tested and operationalized in approaches to planning, project delivery, capital investments, and more. Innovation often manifests as a technical solution—for example, new sensor and monitoring technologies or pilot demonstrations for a nutrient recovery facility. But One Water innovation can also mean developing new processes, work structures, or partnerships. One Water innovations can bring efficiencies, financial savings, or new benefits for the utility or community. Leaders who encourage innovation often encounter resistance, but they hold steadfast to their vision and goals even when there's pushback. In this section, we explore the core capacity of enabling innovation to drive One Water adoption in utilities.

Design work structures that nurture innovation.

One Water leaders prioritize, pursue, and support innovation at their utilities. They have to make judgments, based on analysis and instinct, about which innovations to prioritize and pursue. Leaders also have to create the enabling environment for their teams to actively pursue innovation together. Some have formal working groups around a specific task or product development. Others utilize “skunk works,” a concept in many engineering and business communities to describe loosely structured groups of people who innovate.

The team aspect is especially important in pursuing One Water innovations. Some utilities are formalizing the innovation function in staff leads or departments. Yet Ted Henifin in Hampton Roads cautions against centralizing the responsibility for innovation within a single unit or office. “It doesn't just belong in an office somewhere; it belongs in everybody's head. At Hampton Roads, we've been pretty successful in embedding innovation in everybody's thought processes.” By sustaining a culture of innovation, utilities are able to shift from one-off One Water related projects to institutionalize a One Water way of operating the entire utility.

The 10 changemakers are doing this by mobilizing stakeholders around them to incentivize innovation. This may involve working with regulators or finding financial and other resources to help innovators. “Sometimes all you need to do is set a clear direction, hire good people, and get out of the way,” Michael Mucha learned with Madison's chloride reduction mandate. “We needed to reduce the amount of salt that passes through our system. Removing it through treatment would cost \$2 billion,” he says. Mucha established a new ecosystem services department and hired and promoted collaborative innovators to work on the problem. Within a few years, the team established a regional consortium around salt reduction programs called Saltwise. They now train public works departments on road salt spreading. “All of these innovative programs were led by others. That is the best part,” Mucha states.

In Camden, Andy Kricun is using international standards to convey the One Water approach to his utility staff and promote innovative thinking and action. “As a public sector utility, we can still learn from the private sector model of efficiency and put it to use for the public good, including cost efficiency, environmental optimization, and community service,” Kricun says. The utility implemented ISO 14001 for an environmental management system certification to help meet compliance regulations and manage risk, while addressing new opportunities. This provides a framework to identify the utility’s main One Water goals and then harness the wherewithal of Camden County Municipal Utilities Authority (CCMUA) to systematically work together to achieve those goals.

Take measured risks as part of the innovation process.

One Water leaders value measured risk-taking. They accept mistakes and failure as part of the innovation process. In a One Water culture, people and agencies work across boundaries and in new capacities. Years ago, Phoenix Water started to work with the City of Tucson on an unprecedented water-sharing agreement. Kathryn Sorensen knew that innovative governance would come with legal and political unknowns, hesitations she had felt herself. “As the director of the organization,” she recalls, “I tried to make it known that this innovation was something we were going to do, period. I helped clear the path for the employees that had to manage the legal, operational, and political aspects. I cleared the path as best I could by being the most stubborn person in the room.” There were many reasons not to pursue a new agreement; Sorensen gave her utility and partners a reason to try anyway.

Norma Camacho took a risk in overcoming the entrenched silos of water management in Santa Clara County, CA. Valley Water was working on three major projects—flood protection, dam safety, and fish habitat—for a single waterway, Coyote Creek. “I was discussing the benefits of One Water and integration and it just hit me right in the face: we’ve got three different teams working in three different silos on projects which all affect Coyote Creek. We should be working together on this,” she thought. There was pushback at first. Staff felt they’d fall behind on their project’s schedule if they had to coordinate with the other teams, or that incorporating the other issues

would increase the complexity of their project. “What I did was to say to everybody, ‘We’re all going to meet as a team. We’re going to integrate our efforts.’” Camacho had every team describe its project, which led the group to recognize and discuss how to leverage the inter-connectivity among them, thereby strengthening each project. “It took a lot of coaxing to get people to really talk, for instance, to have the biologists weigh in about design modifications to be considered to lessen habitat impacts.” The dialogue led to changes in behavior. “We have our planning and biologist teams working lockstep with our construction and design engineers on developing a new design approach,” she expands. The teams are innovating ways to lessen the impacts of construction to the creek.

Leaders have to acknowledge their errors, Henifin adds: “We tried some stuff and if it wasn’t working, I wasn’t afraid to back out. The organization got to see me say, hey, you know my idea that we tried, it didn’t work, or see me back up and do something different.” This testing offers moments of learning along the path to One Water. One Water is still a relatively new area, and there is a lot to figure out along the way. The same goes for the utility’s top leadership, Henifin says. “You have to demonstrate risk-taking behavior at a high level in the organization and get your senior managers to start demonstrating some of that. Show that we’re willing to take measured risks and try some new things. If it doesn’t work, we can regroup. This is part of innovation and how we push as a sector to a new paradigm.” Of course, leaders must maintain the sector’s standard of protecting public and environmental health at all times. But they also aren’t afraid to step outside the box where they can.

Celebrate solutions that reach for One Water goals.

When a solution pays off, it's important to celebrate the organization's successes. This enables an innovative environment over the long term. "You have to celebrate innovation. We encourage our employees to be an active part of positive solutions and when we try something different, we really celebrate it," Sorensen affirms.

Phoenix Water cut the ribbon on an innovative biogas recovery facility in mid-2019, and Sorensen couldn't wait for the celebration. "It's the largest facility in the US, and a public-private partnership. We're cleaning the gas, putting it into the pipeline, and selling it on the green energy market in California. We're super excited!" she said. The process will reduce the utility's reliance on fossil fuels, recover valuable resources, and may generate as much as \$2 million in income annually. "Every single product that comes out of the plant will be beneficially reused," Sorensen adds. "I'm going to celebrate!" A sure part of the celebration: the utility will be giving out Pelican Awards to those instrumental in the success. The awards—stuffed toy pelicans—are named for an incident in which a utility employee saved a pelican that was choking on a fish in one of the organization's wetlands. "He shoved his hand down the pelican's mouth and saved it. It made the news," says Sorensen, "So now, all of our awards are pelican awards and it's really popular among the employees."

Leadership Advice

- **Learn by doing.** Stay up to date at the edge of One Water innovations and developments. Learn how different legal, regulatory, technical, economic, and other contexts affect implementation and operation. But recognize that there is no innovation playbook or silver bullet answer. "It's the doing that helps you to see where the needs are and what might work," says Mami Hara. "It's the experimentation and the grappling with real issues that allows you to come up with these ideas."
- **Move beyond discomfort together.** Anticipate the technical and social issues that arise when advancing innovation—and develop strategies to address them. "Get people out of their comfort zones, get them face-to-face with people they don't normally talk to, and begin those conversations," Norma Camacho suggests.
- **Dive in and try something new.** "You can go much further by just going and doing something and stretching those bounds as far as they let you go before someone pulls you back," says Ted Henifin. "Often you find they aren't going to pull you back."

CAPACITY IN ACTION

Clearing a Pathway for a Lead-Removal Innovation in Denver

Lead service line replacement is a growing concern in many cities. Utilities are grappling with finding feasible, comprehensive solutions. In Denver, even though the water supply is lead free, up to an estimated 65,000 homes in the metro area have lead service lines connecting to the utility's mains. For years, the utility was involved in regulatory discussions about how best to manage this problem.

After the Colorado Department of Public Health and Environment directed Denver Water to implement orthophosphate corrosion control for lead service lines, the utility wanted to pursue an alternative that hadn't been tried in the United States before.

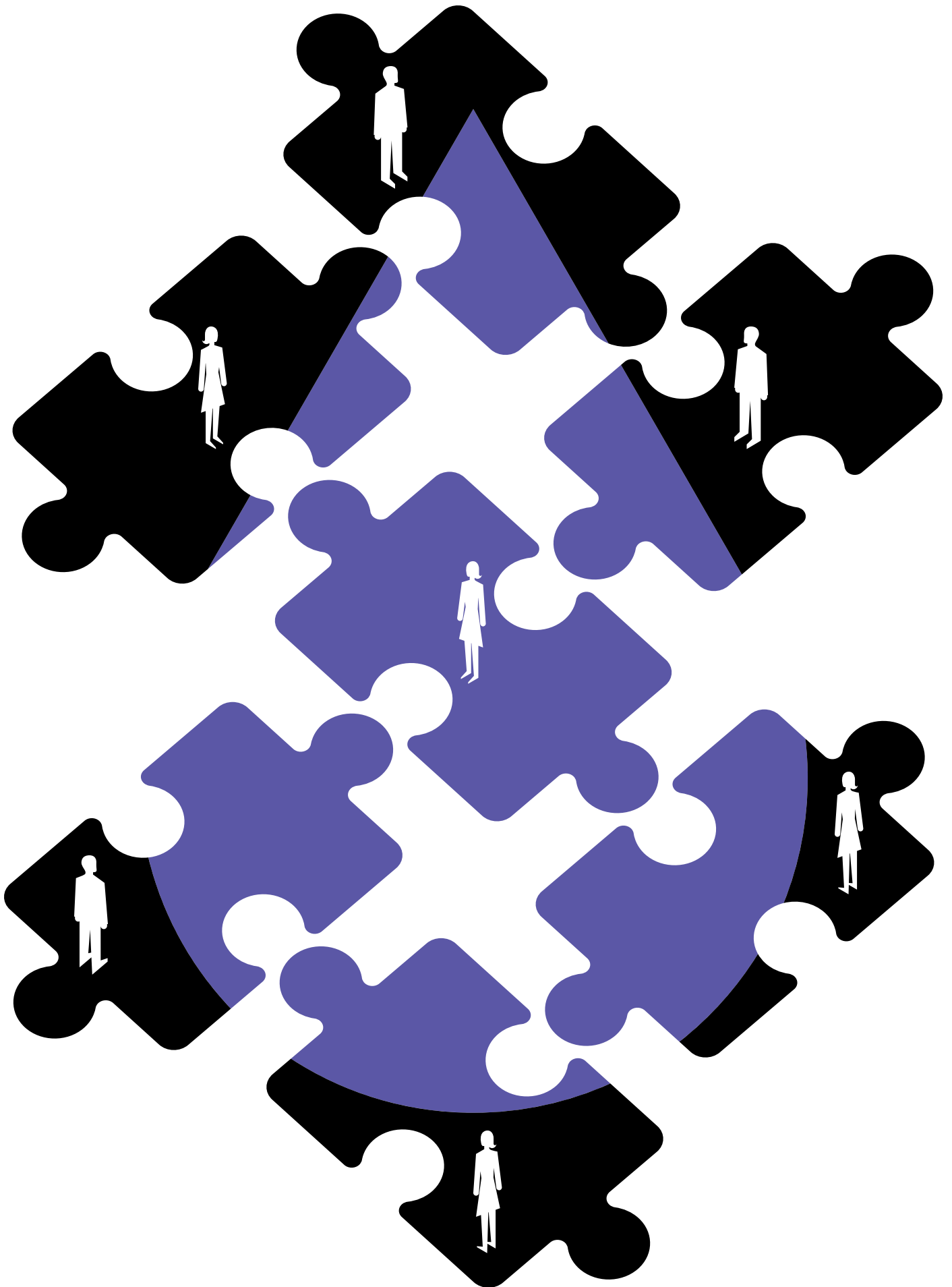
Proposing an alternative was a highly sensitive idea given the national outcry over the Flint water crisis. The utility proposed an alternative program in 2019—using filters in homes, pH adjustment, and accelerated removal of lead lines. They made this recommendation for several reasons. For example, orthophosphate could help reduce the leaching of lead into pipes but may have unintended environmental consequences such as nutrient loading in rivers and streams, and algal blooms in lakes and ponds. Their alternative plan would mitigate environmental issues downstream in the watershed, be less costly, and do a better job of protecting public health. "It's a completely different approach than what regulators would traditionally have required of us," Jim Lochhead explains.

"The first thing we had to do was establish credibility," Lochhead says. "We conducted studies of various treatment techniques on lead service lines. We had to establish that cost wasn't the issue or driver. The real issue is public health. We had to demonstrate through statistical analysis and modeling that what we're proposing is better for public health. Establishing that credibility opened the door to having conversations about the alternative."

The process took many months and led to the next step. "We've demonstrated that what we're proposing has a potential for greater public health benefit. So, we submitted a variance request to the Environmental Protection Agency (EPA) that received over 97% strong support through public comments," Lochhead explains. A variance is an approval for a different way of doing things that still adequately protects public health. The EPA approved the variance request, and Denver Water is set to begin removing lead lines, distributing filters, and implementing pH adjustment in early 2020.

The utility will remove lead service lines over a 15-year period, at a rate of 7 percent or about 4,500 lines annually. Removal will be prioritized in neighborhoods with the highest risk first. The program is financed through customer rates, with a projected 1 to 2 percent increase to cover the costs. By 2021, the average Denver Water customer will have a bill of about \$45/month. The lead removal program will add about an additional \$1. Denver Water recognizes that even this small amount may be a burden for some customers and is working to identify and work with those customers.

Denver Water's innovative approach to address lead issues will involve one of the largest lead replacement programs in the United States. Clearing the path to this innovation involves several steps, financial hurdles, and legal battles. In the meantime, Denver Water is proactively treating and controlling for lead corrosion, expanding their lead outreach and education program, and offering free at home testing kits.





BUILD TRUST AND COLLABORATE

Develop dependable “win-win” relationships to optimize One Water solutions.

BUILD TRUST AND COLLABORATE

TO BUILD TRUST AND COLLABORATE:

- Recognize everyone is a potential partner.
- Create multiple channels for honest conversations and meaningful outreach.
- Co-develop solutions through continuous relationship building.

The transformation to One Water isn't easy, and is a path that cannot be taken alone. One Water solutions involve a host of technical and social complexities, and collaboration is essential. Within a utility, staff must trust their leader can move the organization to a better place. Relationships with the community also matter. These may have to be sought out, developed, or repaired. Leaders acknowledge the important role trust and collaboration play in One Water transformation and the time it takes to get there. This section covers how leaders navigate relationships with diverse stakeholders.

Recognize everyone is a potential partner.

Leaders know that the heart of One Water is establishing a common ground we all can work from. Everyone needs clean, safe, affordable water; flood and drought protection keep communities safe and economies and ecosystems healthy. Leaders view other utilities, community groups, environmental organizations, government agencies, regulators, and just about any stakeholder as potential partners in developing One Water solutions. "We have 26+ units of government, cities, villages, towns, sewage systems," explains Madison's Michael Mucha. "Every community has different interests, but we're still a single wastewater utility focused on One Water. We make One Water work based on what's important to these other communities as well."

Where do trust and collaboration begin? Atlanta's Kishia Powell says that to "build trust internally and get people to come out of their shells, people need to trust they are in an environment where they can flourish." Multi-level engagement in an organization—from executive leaders to staff, engineers, and operators—enables action across the board. When employees thrive, everyone wins. Externally, "you have to start with understanding the economic benefit that the utility brings to the local economy. Once folks understand that, you can transition into the triple bottom line or the social aspect of what we do," Louisville's Tony Parrott notes. "The work of utilities can then be used as a revitalization tool for distressed communities and to provide opportunities for businesses that are reflective of the demographics of the community you serve," he says.

New collaborations are increasingly needed to solve water and community problems, asserts Phoenix's Kathryn Sorensen. "You're seeing a trend of including environmental groups in utilities' policy discussions about how to manage Colorado River issues. In the past, utilities looked skeptically at the involvement of environmental groups on water policy. But we took a different look and said, nope, we have more in common than we have differences. There are ways we can help each other out."

One Water leaders position the utility as a partner, and as an open and trusted One Water voice in the community. They break away decisively from the traditional "silent service" culture. "Collaboration is always important," Camden's Andy Kricun says, "But to see it in action; that's

my favorite part of the job. We can do more than our core operations.” These leaders want the utility to be heard and seen as a force for economic vitality and sustainability.

Create multiple channels for honest conversations and meaningful outreach.

One Water leaders are skilled listeners and work hard to understand what stakeholders think and care about. The 10 changemakers told us they want to know what is on the minds of not only their employees, but also potential partners, customers, communities, and other stakeholders.

Ongoing dialogue with the community requires a leader’s personal touch, a way of establishing more than a remote institutional relationship with customers and stakeholders. Sorensen has learned that communication is personal. “What’s been most effective is to communicate directly with community groups, and when you talk with folks at a personal level, they get it,” she says. For Sorensen, the power of storytelling, not just providing data, makes that personal connection. She uses the story of Phoenix’s canal structure to create broader understanding and perspective of water management. “The canal structure that we use in Phoenix today is based on the structure that was built by Native Nations a thousand years ago. I weave a story about that legacy and why it is our responsibility to continue it for future generations. People want to see their children and grandchildren also enjoy this quality of life.”

Outreach cannot be a one-off effort or seen as a “box” to check off. One Water leaders work to reach everyone who needs to understand a new decision or weigh in on the potential impacts of an upcoming project. They create new ways to enable engagement for individuals who work long hours or have caretaking responsibilities in addition to a job. They take all engagement opportunities seriously—community meetings, town halls, surveys—and focus on being transparent, open, accountable, and accessible. Community members may have previously been negatively impacted by projects or felt left out of decisions, and they may distrust the utility and lump it in with other government agencies. Moving beyond distrust to partnership is hard work, but it’s necessary. Just as One Water breaks through the “out of sight, out of mind” infrastructure mindset, so too must leaders uplift community voices.

Communities are less concerned with the technical details; they want to know how a utility’s work impacts their neighborhoods, rates, and the value of a project for residents. One Water leaders work to understand community impacts *before* project plans are made, through interactions with the community—often facilitated by community partners. Kishia Powell explains: “Being in Atlanta, where customers are paying high rates, you have to care about what they care about. Our stakeholders care about service delivery. But this is the home of the civil rights movement; we care about equity, too. We care about environmental justice and affordability, as well as having a say in the solutions that are implemented in a community.” Having honest conversations about water management strategies involves thinking about them from a resident or community perspective.

Co-develop solutions through continuous relationship building.

One Water involves the full participation of other parties in the problem-solving process and, often, in implementing the solution. One Water leaders live by the principle of co-developing solutions with their team, the broader water sector, the people in neighborhoods where problems exist and projects are envisioned, and the larger watershed community.

Trust remains the secret ingredient to making this happen. One Water leaders convey their understanding and respect for the interests and points of view of others. “The simple formula to being trustworthy is to deliver what you say you’re going to deliver,” Hampton Roads’ Ted Henifin says. “Whoever you’re dealing with knows what to expect from your organization or from you as an individual.”

Leaders relate in open, collaborative ways with external entities, seeking to identify and co-develop mutually beneficial approaches to solving problems. Building collaborative relationships requires honest conversations among the parties and clarity about the utility’s intentions. “We want everyone to figure out that we’re all on the same side,” says Henifin. “Where is the middle ground? Where’s the win-win? What can we do to support each other? That’s the lengthy process of building relationships. To be effective collaborators you need to go at it without any expectation that you’re going to get anything out of any particular outreach effort.”

Developing mutual understanding can be difficult. But this helps uncover common interests, or at least moves groups past defending their own positions to see how individual interests can support one another. Building toward a joint vision can help achieve each individual stakeholder's agenda. Mucha describes a multi-year process he led in Olympia, WA, developing a collaboration with the Nisqually Indian Tribe. The city wanted access to groundwater that the tribe had rights to. "It was a very challenging learning experience. You're talking about values and beliefs, priorities—and they were completely different. Our priority was we needed a drinking water supply *now*. The tribe was saying, 'That's not our problem. We look across seven generations. Water is sacred to us and so our value of water is different than just a commodity.'" The city slowed down its timeline for a resolution and started building a relationship. "We had to honor who they were, so they would be able to trust us, and so they could honor who we were." Eventually, the city gave the tribe a natural spring that the city owned in exchange for groundwater rights. "The spring," Mucha says, "became a spiritual place."

Partnering evolves over time, often starting small and tentatively, but expanding and solidifying with experience. "Our relationship with Cleveland Water continues to get closer and closer because from our customers' perspective, it's just water," says Dreyfuss-Wells. "We put clean water into the Cuyahoga River and Lake Erie, and they take clean water from these sources for their customers. We work with them on improvements to our affordability programs and other equity questions."

Leadership Advice

- **Prioritize trust as the basis for strong, enduring collaborations.** One Water solutions inherently require broad participation and co-creation of solutions. Leaders advise up-and-coming professionals to embrace and pursue trust as the basis for strong, enduring collaborations. Building trust requires honest engagement and time. "Trust is established by understanding the needs, fears, and concerns of others. If I feel confident that you understand what's important to me, I'm much more likely to trust you," explains Michael Mucha.
- **Be upfront about the utility's intentions and actions.** Anticipate how the utility's actions might produce community concerns, says Kyle Dreyfuss-Wells. "Our approach is for clear and frequent communication, but also we're direct if something's going to change and it's going to have an impact on folks. We make sure that they understand that beforehand and we work through any discomfort." Kishia Powell agrees and encourages honesty and transparency about what is working well and what can be improved.
- **Fully inform the community, stakeholders, and customers about the utility's performance.** Promote effective dialogue and build support for the utility. Providing reliable information and explanation, and anticipating what others need to know and how they will respond, is hard to do well and consistently.

CAPACITY IN ACTION

Collaborating as an Anchor Institution in the Community

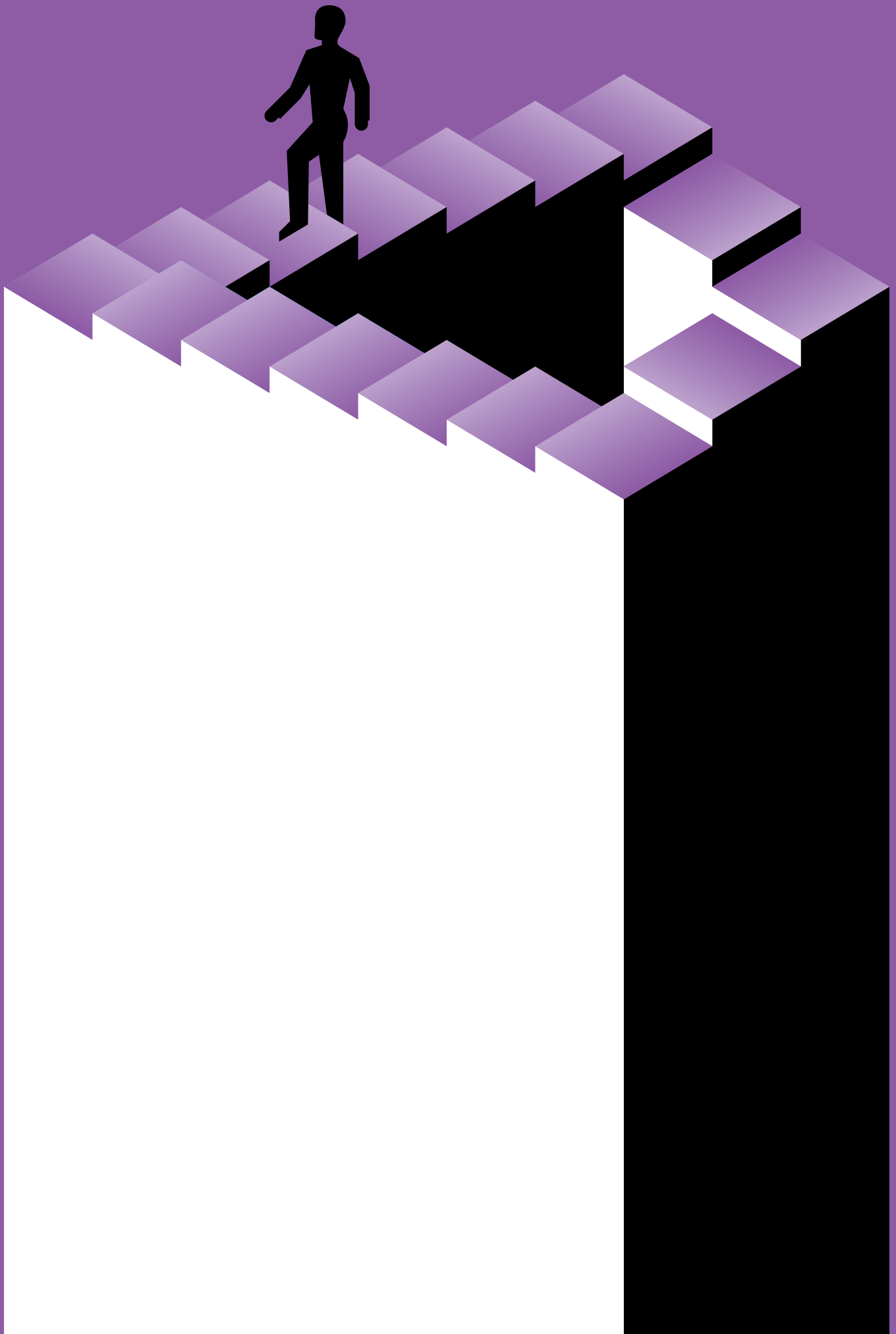
As the Executive Director and Chief Engineer of Camden County Municipal Utilities Authority (CCMUA) in Camden, NJ, one of Andy Kricun's goals was to change the way the utility interacts with the community and empower their voices and strategies as part of the utility's decision-making processes.

Under Kricun's leadership, the utility became a founding member of the Camden Collaborative Initiative. This solutions-oriented partnership involves more than 50 community-service organizations, environmental groups, city government, and state and federal regulators.

The collaboration began when Kricun responded to a small fine for a minor regulatory infraction by proposing instead to build a rain garden in the community. The utility wasn't sure how to do this, so he reached out to a state university for technical assistance and it brought a nonprofit organization into the project. When the garden was completed, Kricun notes, "We said, 'We should really do this citywide.'" Kricun initiated a round of personal outreach to pull together potential partners in the community. "There's a verbal compact among us to construct green infrastructure across the city." As more organizations joined, Kricun got more ambitious. "I asked if they would expand the role to other things: brownfield cleanup, recycling, illegal dumping, or environmental justice issues."

Kricun says taking a leadership role in building the initiative was important for the utility. "We are striving to be an anchor institution in the community and do as much good as possible," he says. While Kricun took the lead on bringing people together, he notes that many partners were already headed in that direction. The initiative grew from the leadership and collaboration of a whole network of individuals. "It was more just saying, hey, we can all work together and accomplish more than we can separately," he recalls.

"The collaborative is my favorite part of the job," Kricun notes. The initiative shows CCMUA is a trusted collaborator, and the many partners involved demonstrate what changemakers reiterated time and again, that *the team* is the leader. Together, the collaborative's partners plan and implement ways to improve the local environment's health, revitalize the community, and enrich the lives of residents. Embedded in these sustained relationships, the utility has launched almost 50 green infrastructure projects and helped develop five riverfront parks. Kricun explains: "We've cleaned up 100 acres in Camden—all with volunteers and without raising taxes."





ADAPT AND LEARN

Adjust one's leadership approach
to meet current and future challenges
and opportunities.

ADAPT AND LEARN

TO LEARN AND ADAPT:

- Pursue new skills and knowledge.
- Self-reflect and improve.
- Develop and maintain feedback loops.

In the transformation to One Water, everything is a target for improvement—including oneself. Change leadership is a journey—a work in progress—not a destination. One Water leaders are constantly learning about water management and their communities. They focus on continuous improvement of themselves and processes in the organization. They constantly adapt their approach. Leaders identify what they know, what they're good at, and what else they need. This self-awareness can make it easier to accept critical feedback from others. This section covers how leaders respond to the current challenges while balancing future opportunities.

Pursue new skills and knowledge.

The ability to learn and adapt one's leadership approach means constantly taking in new information—about the field of practice, new technologies and innovations, and how communities are engaging with water issues. One Water leaders are willing to reveal what they do not know so that it can be the basis for feedback. “The most refreshing thing for me, the most freeing thing, is being able to say, ‘I don't know. What do you think?’” Atlanta's Kishia Powell remarks.

Years ago, Louisville's Tony Parrott and several other General Managers established an informal Water Agency Leaders Alliance (WALA). The executives meet and discuss One Water management, workforce development, how to approach equity, community benefits, sustainability, artificial intelligence applications in the sector, and more. The goal was to learn from one another and grow their skill sets. “How can we achieve successes more quickly by borrowing things from others?,” Parrott notes, “Let's learn from what's not working and share ideas about what is, not reinvent the wheel. For instance, one thing I sought to learn was how can we better engage the community and message things to different groups?”

One Water leaders identify gaps in their skill sets, learn from their mistakes, and adjust their approach. Reflecting on her early days at the utility, Seattle's Mami Hara says, “I made the mistake of putting inquiry research and ideas first. I wish that I had known from the get-go that you really have to first get a beat on the culture and work on that immediately. I always worked with the approach of changing opinion, rather than understanding that opinion is not culture. As a planner and urban designer, I had some experience in opinion influencing, but definitely not in culture shaping. I was very into the technical and strategic aspects of the work.”

Self-reflect and improve.

For the 10 changemakers, building emotional intelligence is key. Adaptive learning involves working to understand *how* they lead and *why* they lead that way. The 10 changemakers use various tools—coaches, books, classes, personality assessments—to develop this knowledge, and it becomes a basis for reflection and self-improvement. For instance, Powell uses a “whole brain” quiz to understand her problem-solving preferences. “I skew toward being very data-driven and methodical, and I care about people and their concerns. But I know that to have a ‘whole brain’ among our team, I’ve got to have people we’ve identified as more visionary, who are going to exercise that part of their brain more. The team has to complement each other in the way we think.” As they test new ideas and strategies, they also learn about their leadership style. Hampton Roads’ Ted Henifin found insights from reading the book, *The Innovator’s DNA*. “They talk about five traits that make innovators different. A skill they highlighted is sitting back and listening and trying to get the bigger picture,” he says, “I think I do a pretty good job at that.”

When One Water leaders become aware of how they might improve, they work on it. “I have difficulty giving feedback. People say I’m difficult to read,” says Denver’s Jim Lochhead. “Part of it comes from not wanting to be judgmental of people.” So, Lochhead works on “articulating and providing clarity in terms of exactly what I mean and providing honest and useful feedback. I’m learning to provide feedback in a way that’s a conversation, not just a one-way communication.” Santa Clara’s Norma Camacho cites a different challenge: “I used to be more preachy about things. What I’ve learned as part of growing in leadership is how to listen and to put myself in another’s shoes.”

Improvement doesn’t always come easily, as Ohio’s Kyle Dreyfuss-Wells notes. “I recently realized that I have a reputation for being an interviewer of staff,” she says. “Meaning I can be an ‘aggressive questioner,’ which not everyone feels comfortable with depending on their style of communication. So, I’m trying to figure out how to have a conversation that’s not just an interview. But I’m not quite there yet.”

Develop and maintain feedback loops.

One Water leaders actively invite feedback and are open to criticism. They obtain candid feedback, seeing it as a tool for improvement. To do this, the changemakers told us they must establish a basis for trust among employees who, naturally, might worry that providing feedback to their supervisors may have repercussions.

To get honest critiques that fuel learning and adaptation, leaders craft feedback loops in various ways. They recognize that how they seek and react to advice and critique affects what they will hear. “CEOs have to understand their potential to shut down a conversation if they react too quickly or strongly or don’t control themselves,” Dreyfuss-Wells says. “The job of a CEO is to understand how you come across and the impact that you can have on folks all the time.”

Leaders look at themselves from someone else’s perspective. Madison’s Michael Mucha learned from telling others about his failures: “There were things that I felt weren’t going smoothly, and I was like ‘What am I missing? What am I doing wrong?’ And I was very enlightened through working with colleagues who were experiencing similar challenges. It’s not about hearing your ‘hero story,’ but about hearing your failure stories—let’s dive into them and learn from them.”

Conversation with peers, especially those pursuing One Water transformation, is another important feedback loop for adaptive learning. In fact, the 10 changemakers said learning One Water leadership skills and strategies from others was essential. They have a natural curiosity about what their peers are doing and figuring out. And they are not shy about asking.

The learning agenda they describe ranges across many how-to topics. “I really like to know the details of what other utilities are doing. How they structure their senior staff, run meetings, and how they interact with other staff and their governing boards. How often are they out at the facilities? What’s the pressure on their rates? What’s their focus on strategic planning?” says Dreyfuss-Wells. On the other hand, “How deeply are they taking One Water? Is it going into their budgeting and getting into their planning?” Hara adds, “I also like asking others about the politics they encounter. There are so many lessons we can share with each other.”

What they learn from these feedback loops, One Water leaders share with others. Spreading insights about leadership, One Water strategies, and lessons learned grows the movement. The 10 changemakers reiterated the importance of their personal growth and helping their staff build the capacity to learn and adapt as well.

Leadership Advice

- **Communicate your leadership approach.** Tell others about your questions, concerns, reflections, and learnings about leadership. This is an effective way to build alignment across your organization.
- **Be comfortable with the demands of leadership.** Leaders often have to make choices that involve complex processes and difficult problems. “I am a decisive individual,” says Kyle Dreyfuss-Wells. “I will listen to various points of view for a certain period of time. But I won’t just let folks run on. Make decisions after listening to the information that’s available.”
- **Get advice from others.** Participate in networks and organizations focused on One Water change and seek out and “interrogate” other One Water leaders. “Always be in a position of learning and being open to innovative ideas, because that’s what it’s going to take to ensure that we have reliability, resilience, and sustainability in our communities. As you progress through your career, always ask, ‘Why not?’ Never get to the point where you’re shutting things down or thinking that there’s always one way to do things,” says Norma Camacho.

CAPACITY IN ACTION

From Adaptive Learning to Adaptive Management

Faced with a total maximum daily load (TMDL) and new phosphorus requirements for their wastewater treatment plant discharge, the Madison Metropolitan Sewerage District (MMSD) and other One Water leaders in the community came together to test Wisconsin's innovative, watershed-based compliance approach for phosphorus reduction, called the Watershed Adaptive Management Option. Rather than complying with these requirements by building additional treatment, the group developed plans to reduce all sources of phosphorus such that the rivers, lakes, and streams would meet their water quality criterion.

To accomplish this, the various stakeholders had to learn from one another and adapt their current institutional frameworks. For instance, "In the sewerage district, we're experts at building infrastructure," explains Michael Mucha, the District's Chief Engineer and Director. "But achieving buy-in to invest ratepayer dollars in the watershed and paying for agricultural practices or leaf management requires vision and leadership as well as taking on new risks and a new way of thinking. We found that by working together and solving the right problem, we can save our ratepayers significant investment and improve the environmental health of our community."

In 2012, the District established the Yahara Watershed Improvement Network (Yahara WINS) Pilot Project to test this concept. This was a four-year project involving a regional collaboration of cities, towns, treatment plants, agricultural producers, state agencies, and environmental groups that developed adaptive management strategies to meet nutrient reduction targets. Yahara Pride, a farmer-led coalition, and three local county conservation departments brought farmers and landowners to participate in the project and deploy a suite of low-cost practices including harvestable buffers and cover crops for nutrient reduction across the watershed.

The result? Wisconsin was the first state to use an adaptive management approach to National Pollutant Discharge Elimination System (NPDES) permits, and Yahara WINS was the first project to test the approach. In 2016, after the successful conclusion of the pilot project, the District and 23 other regulated partners entered into an Intergovernmental Agreement to pursue a watershed-wide, 20-year adaptive management project to achieve compliance with their NPDES permits and improve the health of the rivers, lakes, and streams throughout their watershed.



CONCLUSION

This report is based on the experiences and insights of 10 remarkable water utility executives leading One Water transformation. The framework here is an effort to better understand the exciting shift happening in the water industry toward a more holistic, systems-based approach, and to characterize the leadership capacities that enable this shift. While this report focuses on water utility managers and their roles, the leadership capacities described can apply to any stakeholder group looking to advance One Water.

We've seen that change leaders don't do this work all by themselves. Leadership is hard—it is messy, there is no one approach, and those on the path to transformation will encounter resistance. Leadership is something you choose to do in pursuit of a higher goal. But One Water leadership can happen from anywhere and for anyone. Whatever level of water management or governance one is engaged on, experimenting with and learning these capacities helps. One Water change is a team sport, and a diverse team—inside and outside the utility—is a better team.

What matters, then, is to develop these capacities *throughout the water sector*. The US Water Alliance is looking for ways to partner with others to achieve this. There are many ways we could do this. These capacities can be, and *are* being, learned. Mentoring between current and future One Water leaders can help advance these changes. With a retiring workforce, more leadership development programs are emerging throughout the water sector. Key components of these capacities could be included and practiced in professional education and development programs. The sector could explore interdisciplinary exchange programs with engineering schools, or water-system change initiatives supported by philanthropies and governments. Perhaps the framework even provides new ideas for human resources departments in utilities or onboarding materials for utility staff.

One Water is about much more than the 10 utility changemakers included in this report. It's about how to grow a generation of One Water leaders who will accelerate and spread transformation across the water sector. From small to large utility operators, but also agricultural leaders, riverkeepers, and businesses, this report is about building the capacities needed so that One Water becomes the everyday standard.

We at the US Water Alliance invite you to share your thoughts with us and to explore opportunities to collaborate and partner to grow One Water leadership.

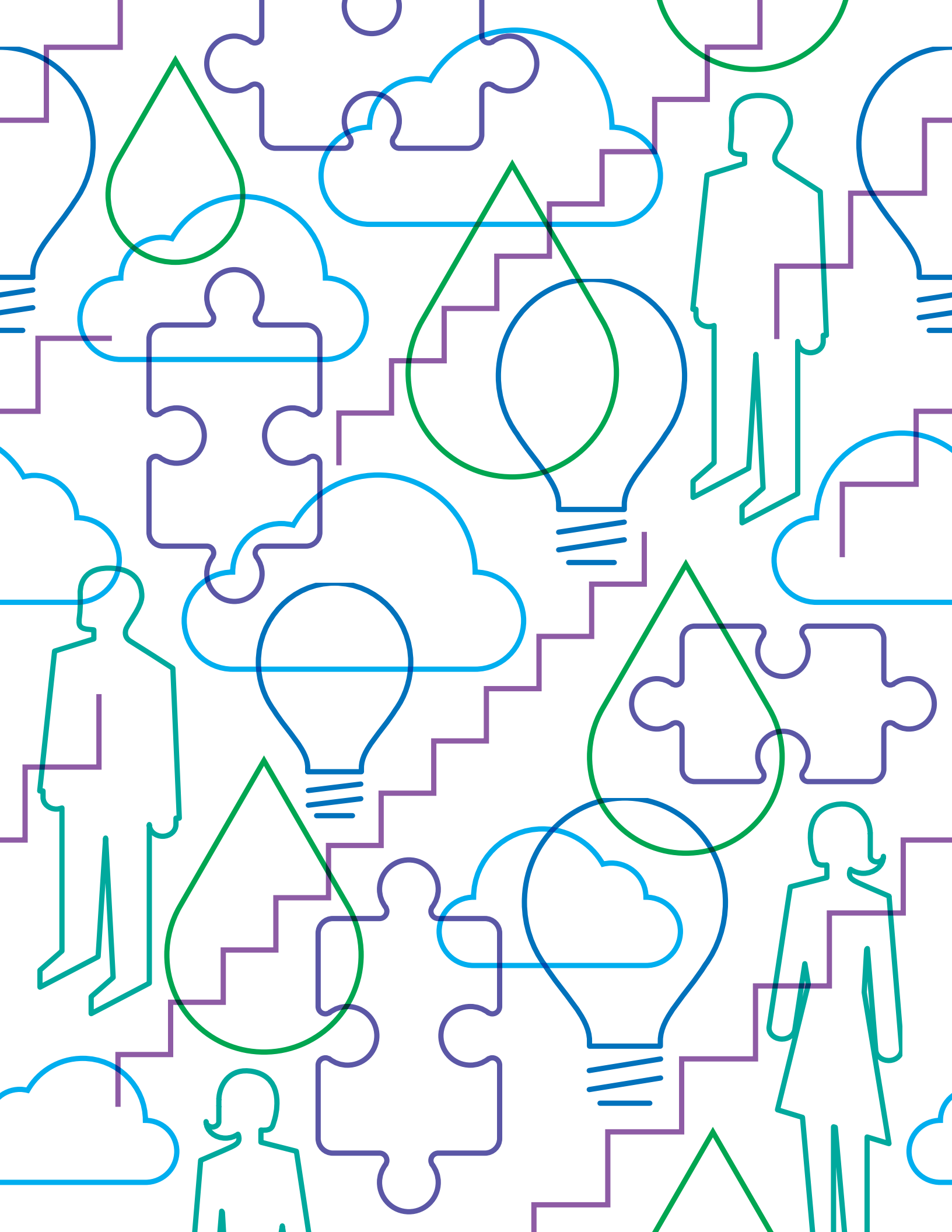
ABOUT THE ALLIANCE

The US Water Alliance advances policies and programs to secure a sustainable water future for all. Our membership includes water providers, public officials, business leaders, agricultural interests, environmental organizations, community leaders, policy organizations, and more. A nationally recognized nonprofit organization, the US Water Alliance brings together diverse interests to identify and advance common-ground, achievable solutions to our nation's most pressing water challenges. We:

Educate the nation about the true value of water and the need for investment in water systems. Our innovative approaches to building public and political will, best-in-class communications tools, high-impact events, media coverage, and publications are educating and inspiring the nation about how water is essential and in need of investment.

Accelerate the adoption of One Water policies and programs that effectively manage water resources and advance a better quality of life for all. As an honest broker and action catalyst, we convene diverse interests to identify and advance practical, achievable solutions to our nation's most pressing water challenges. We do this through our strategic initiatives and One Water Hub, which offer high-quality opportunities for knowledge building and peer exchange. We develop forward-looking and inclusive water policies and programs, and we build coalitions that will change the face of water management for decades to come.

Celebrate what works in innovative water management. We shine a light on groundbreaking work through storytelling, analysis of successful approaches, and special recognition programs that demonstrate how water leaders are building stronger communities and a stronger America.





One Water, One Future.

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