United States Environmental Protection Agency

Water Utilities as Anchor Institutions

Impacting the equity, social, and economic fabric of communities and regions

Overview

Water and wastewater utilities are on the front lines of safeguarding public health and protecting the environment in America. They ensure that our water is clean and safe for hundreds of millions of people in communities large and small across the country. Many utilities operate in communities that include populations facing economic hardships such as poverty, unemployment, and aging infrastructure. Utilities are not immune to the effects of these hardships, but they are uniquely positioned as anchor institutions to help address them and create positive economic, social, and environmental impacts in their community. This report shares examples of how utilities promote environmental justice, sustain critical infrastructure investments, and partner with others to advance community goals, often with a focus on utility leadership toward community equity. It is a continuation of EPA's long-standing commitment to work with utilities to promote sustainable management practices, a sustainable water workforce, and sustainable communities.

Anchor Institutions

Anchor institutions are organizations rooted in a specific location that have a long-term interest in the economic and social vitality of the surrounding community.[1] These organizations are often public service entities, such as hospitals, utilities, or universities, who have missions tied directly to the provision of critical services that increase the well-being of the community. Importantly, anchor institutions are also place-based; they often own or maintain large physical infrastructure, such as a campus with multiple buildings, water treatment plants, or conveyance pipe networks that provide drinking water and wastewater services. These physical assets root the enterprise in

What Are Anchor Institutions?

Public service entities—like hospitals, universities, or utilities–which are **tied to a location due to infrastructure or mission.**

Entities that **provide critical services** and vital assets to improve **economy, health, environment, and well-being in communities.**

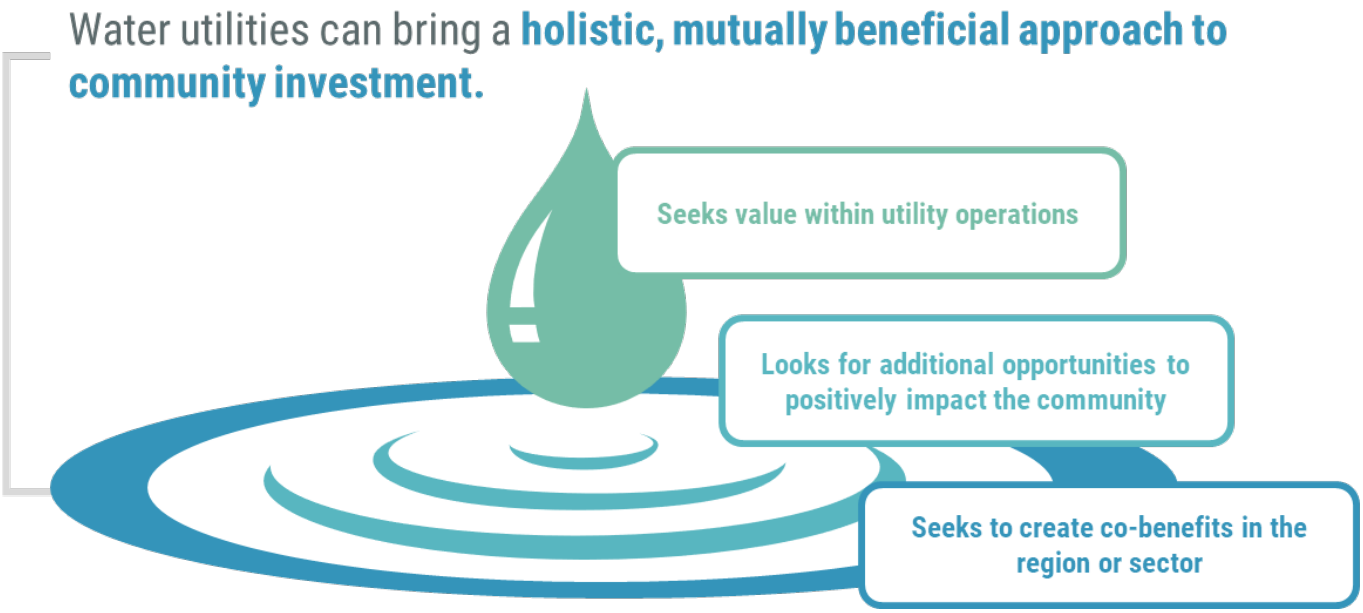
Organizations that **provide active civic leadership** and **participate in and add to the public life and character** of their community.

[1] Taylor, Jr., H. and Luter, G., 2013. Anchor Institutions: An Interpretive Review Essay. [online] Community-wealth.org. Available at: <https://community-wealth.org/sites/clone.community-wealth.org/files/downloads/paper-taylor-luter.pdf> [Accessed 11 December 2020]; https://www.wealthworks.org/basics/explore-regional-wealth-building/wealth-eight-capitals

the community in both prosperous and challenging economic times. For this reason, anchor institutions have a long-term stake and a vested interest in a thriving community. Anchor institutions, as a result of their physical structures (built capital), economic and financial assets (financial capital), human or social capital, and community mission have substantial opportunity to positively contribute to the environmental, economic, social wellbeing, and resiliency of the surrounding community.[2]

Are all water utilities anchor institutions?

Water utilities, by the very nature of their core mission, operations, and physical assets, are anchor institutions. A number of water utilities across the country are now actively communicating about their contribution and seeking to better understand the broader contributions they can make in their communities. These utilities look beyond fence lines and day-to-day operations. They meaningfully contribute to the well-being of their communities by leveraging utility operations and investments to increase economic health, by inviting community involvement, and by providing active civic leadership. The purpose of this report is to highlight what some utilities are doing – and what a utility can do – to broaden their current contributions to the environmental, economic, social well-being, and resiliency of their communities.



Water utilities that act as anchor institutions often embed the following characteristics into their operational DNA:

- Not You or Me, but We: Utilities see themselves as members of the community and approach challenges or opportunities with a collaborative mindset: what will we – as the community – do to achieve or overcome? Utilities can leverage partnerships with like-minded entities that are also invested in the community they serve.
- Thriving Today, Thriving Tomorrow: Utilities understand that they will operate in the community for the long haul and can achieve positive, lasting impacts in the community.

[2] U.S. Department of Housing and Urban Development Office of University Partnerships, 2013. Building Resiliency: The Role of Anchor Institutions in Sustaining Community Economic Development. [online] huduser.gov. Available at: <https://www.huduser.gov/portal/publications/AnchorInstitutions.pdf> [Accessed 11 December 2020].

- Focus on Building Workforce Capacity and Skill Development: Utilities can improve their workforce capacity by developing skills that achieve professional success, not just for individual staff within the utility, but for their contractors and other businesses that operate within the broader community.

EPA's Sustainable Utility Management

This report is a continuation of EPA's ongoing commitment to help support water utilities across America achieve sustainable, effective operations. Effective Utility Management, a collaborative initiative of EPA and professional associations across the water sector, takes a broad look at ten attributes of effectively managed utilities – from product quality to customer satisfaction to community sustainability. For more information on Sustainable Utility Management, including the Effective Utility Management Primer and other resources, visit: https://www.epa.gov/sustainable-water-infrastructure/effective-water-utility-management-practices

Anchor Utility Activity Areas

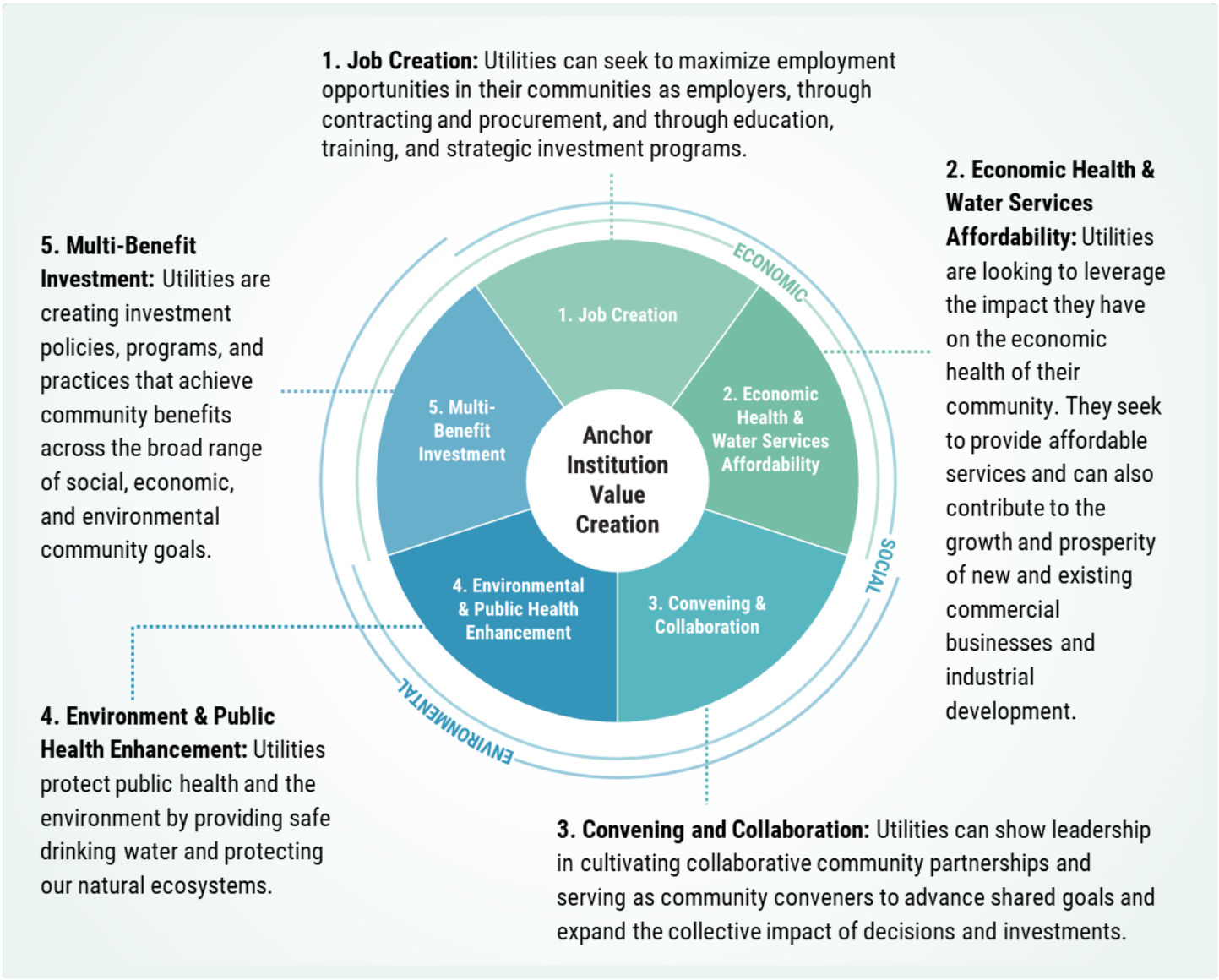
Overview

A number of water utilities around the country are working to create mutual benefits with their community through five strategic activity areas. The activity areas highlighted in this report align with the Community Sustainability attribute of effectively managed utilities.[3] Under the Community Sustainability attribute, the utility takes an active leadership role in promoting and organizing community sustainability improvements through collaboration with local partners. For example, utility leaders can manage operations, infrastructure, and investments to support the broader economic, environmental, and social health of its community. By integrating water resource management with other critical community infrastructure, utility leaders aid social and economic development planning, community-wide resilience, and support for disadvantaged households, community sustainability, livability, and access to greenspace and waterways.[4]

These five activity areas are explored in greater detail in the following section. Each activity area includes a range of practice, an example from an anchor utility, and a discussion on equity. Additional resources are included in the conclusion of this document.

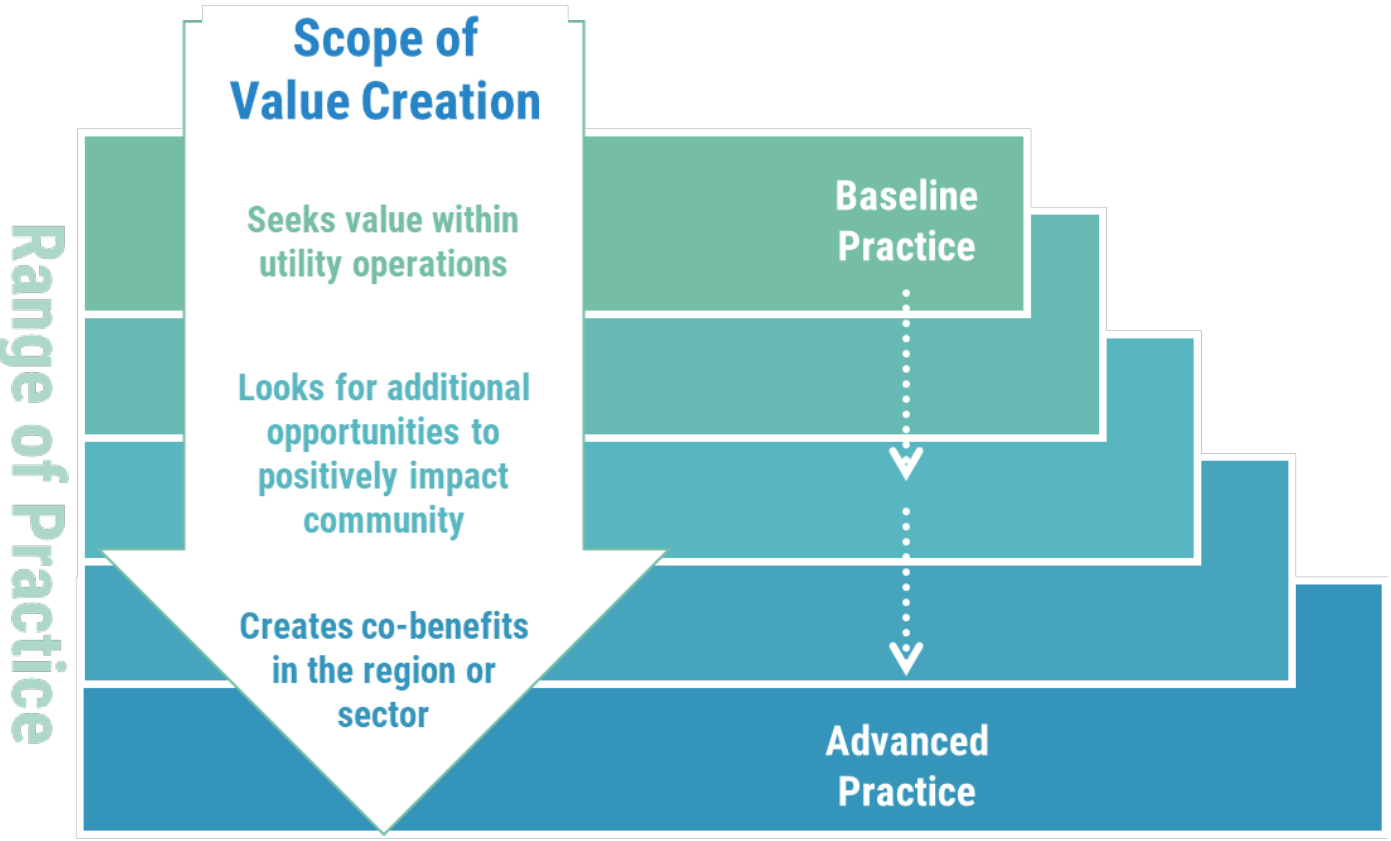
[3] EPA, 2017, Effective Utility Management Primer, https://www.epa.gov/sites/production/files/2017-01/documents/eum_primer_final_508-january2017.pdf
[4] https://www.epa.gov/sites/production/files/2017-01/documents/eum_primer_final_508-january2017.pdf

Figure 1: A visual representation of the five anchor utility activity areas



Following each utility highlight, each activity area also includes examples of practices a utility may implement to positively impact the community. As seen in Figure 2, the practices are organized into a range, from baseline to advanced. This range begins with practices a utility may implement when they are focused primarily on achieving value within utility operations and providing clean and safe water to communities. The range then moves outward and includes more advanced practices a utility might implement to positively impact the community directly, where they may seek to increase the positive impact to their customers, community, or region more broadly.

Figure 2: A visual representation of the range of practice within an activity area



Utility Highlights

The concepts in this document are based on the everyday work of utilities, and this document includes highlights from the following utilities:

- Beckley Sanitary Board (Beckley, WV)
- Capital Region Water (Harrisburg, PA)
- Greater Cincinnati Water Works (Cincinnati, OH)
- City of Saco Water Resource Recovery Department (Saco, ME)
- High Line Canal Conservancy (Denver, CO)
- Sewerage and Water Board of New Orleans (New Orleans, LA)

Equity

Across the United States, some communities are more likely than the general population to experience disparities in health, income, education, lifespan, environmental conditions, and many other factors that negatively impact well-being. These communities may include tribal and indigenous populations and communities of color and are often geographically clustered due to inequitable land use and development patterns and practices, including disparities in the distribution of water and other critical infrastructure. These communities are more vulnerable during and after catastrophic events (e.g., flooding, tornadoes, fires, and sea-level rise), as well as during public health and economic crises. These disparities are the result of structural inequality in the distribution of social, economic, and environmental benefits.

Utilities recognize that they have a vested interest in the long-term well-being and resiliency of their entire community. While these institutions are forward-looking, they also examine the historic and ongoing inequities in their policies, practices, siting, and services so that they can work towards creating change and ensuring that they are not exacerbating disparities but seeking to reduce them. Water utilities have a role in addressing deep and persistent community inequities and doing so affirms anchor utilities' ability to create meaningful and lasting change regarding the economic, social, and environmental conditions in their communities.

Utilities can help address structural inequality in their community by implementing equitable and inclusive internal policies; evaluating how utility programs may disproportionately penalize or burden low-income communities or communities of color; and integrating an equity and social justice framework to inform staffing, operational, and investment decision-making.

Utility Equity Highlight: The Greater Cincinnati Water Works

The Greater Cincinnati Water Works (GCWW) provides water, stormwater, and water-related services to the City of Cincinnati, Hamilton County, and adjacent Ohio and Kentucky counties. With rapid growth in surrounding communities, a decline in water consumption, and the need to diversify revenue streams, GCWW expanded its service areas and provided additional core services (including for stormwater, wastewater, solid waste and yard waste billing, call center operations, lab analysis, professional engineering, and monitoring and maintenance services).

For the past 20 years, GCWW has developed and implemented strategic business plans designed to provide its team with a roadmap for excellence in operations and customer service. A key goal of GCWW's 2018-2022 Strategic Plan was to modernize daily business practices and deliver improved solutions to customers. To create a solid understanding of the current practice and identify areas to improve, GCWW spent time reviewing current business practices and gathering input from community members, including local councilmembers. During this process, GCWW analyzed multiple data sets and determined that the utility was performing more water shutoffs in predominantly black neighborhoods in comparison to predominantly white neighborhoods. GCWW concluded that

this was due to a policy that required residents to pay the entirety of their delinquent water bill at one time. GCWW recognized the disparities in both their business processes and how the utility was serving the customers. GCWW concluded that this outdated business practice, coupled with other systemic inequities, disproportionally penalized predominantly black neighborhoods.

To address the inequitable practice, GCWW worked with customers and openly communicated affordable payment options, which offered to defer, if not avoid, shutoffs altogether.

As a result of modernizing its business policy and analyzing data, GCWW revealed disparities in its business practices, recognized the problem, and changed its policy to ensure that historic practices would no longer exacerbate disparities and marginalize black neighborhoods. GCWW's experience illustrates the importance of reviewing current practices; using data to understand how those practices may be leading to disparities in outcomes; and of creating new, more equitable processes to ensure the utility is providing a high level of service for all community members.

Overview

Across the United States, 1.7 million workers work in the water sector to help design, construct, operate, and govern the water infrastructure our communities rely on.[5] Utilities directly employ half a million of those individuals to provide clean and safe water for hundreds of millions of Americans.[6] Water utilities of all sizes, in both rural and urban settings, offer stable, competitive wage careers. Water utilities can make strategic hiring,

[5] Tomer, J., 2018. Renewing the Water Workforce: Improving Water Infrastructure and Creating A Pipeline to Opportunity. [online] Brookings Institute. Available at: <https://www.brookings.edu/research/water-workforce/> [Accessed 14 December 2020].
[6] Gao.gov. 2018. Water and Wastewater Workforce: Recruiting Approaches Helped Industry Hire Operators, But Additional EPA Guidance Could Help Identify Future Needs. [online] Available at: <https://www.gao.gov/products/gao-18-102> [Accessed 14 December 2020].

procurement, and programmatic education decisions that create job opportunities in and for their community. This section is linked to EPA's commitment to work with utilities and other partners to ensure a diverse, resilient, and sustainable workforce. EPA recently published a compendium of Water Workforce Case Studies describing a range of practices utilities around the country are using to address their own workforce challenges. Many of these case studies focus on ways utilities are reaching out to disadvantaged communities, women, and other groups not historically present in the water workforce to attract them to a career in a utility. Other case studies focus on ways utilities are cultivating their own workforce to provide reliable and effective service to their communities. In a similar fashion, EPA sponsors an ongoing water workforce webinar series to highlight effective and sustainable workforce practices. This information is available at EPA's Webpage on Water Workforce.[7]

Utility Highlight: Sewerage and Water Board of New Orleans

Every year, the Sewerage and Water Board of New Orleans contracts with external firms to provide professional services, construction, goods, and services that help the Board provide wastewater services to more than 300,000 people in the greater New Orleans area. The Board recognized that these contracts represent millions of public dollars annually. While these contracts are critical to successful operations, the Board also saw them as an opportunity to develop a robust, thriving ecosystem of local businesses. In 1997, the Board developed the Economically Disadvantaged Business Program (EDBP) to create a level playing field on which small businesses and economically disadvantaged businesses (EDBs) can compete fairly for Board funded contracts. The program requires that prime contractors utilize EDB subcontractors for at least 35% of the total contract value. The Board theorized that these partnerships would provide exposure opportunities and increase capacity at EDBs and, after a time, result in EDBs being able to act as prime contractors.

After the program had been in place for 20 years, the Board found that despite their efforts, many of these EDBs remained unequipped to bid competitively for prime contracts. Particularly as the Board and the City of New Orleans increasingly partnered to deliver innovative green stormwater infrastructure projects, there was a need to provide additional support to create lasting, transformational change for these EDBs. To help local design and engineering firms develop new skills, a mentor-protégé clause was piloted within several request for proposals (RFPs) to promote knowledge sharing and capacity building for disadvantaged businesses. This is done by asking prime contractors to articulate in their proposal an approach for a continued, structured learning relationship with their subcontractors. These two programs help ensure that public funds are allocated to local firms and that small businesses and EDBs will develop the skills and capacity to successfully compete for and win large contracts now and in the future. The Sewerage and Water Board's job creation and skill-building for EDBs highlight one of many activities a utility undertakes as an anchor institution in its community.

Additional Example Practices

Similar to New Orleans, water utilities around the country are important job creators in their communities. Figure 3 includes examples of the types of practices utilities may implement. This range of practices starts with a focus on internal workforce needs and opportunities and expands to a mutually beneficial approach that builds stronger community involvement. The Sewerage and Water Board of New Orleans exemplifies this ripple effect by

[7] https://www.epa.gov/sustainable-water-infrastructure/water-sector-workforce

establishing, evaluating, and strengthening its community's workforce through the strategic procurement of local goods and services.

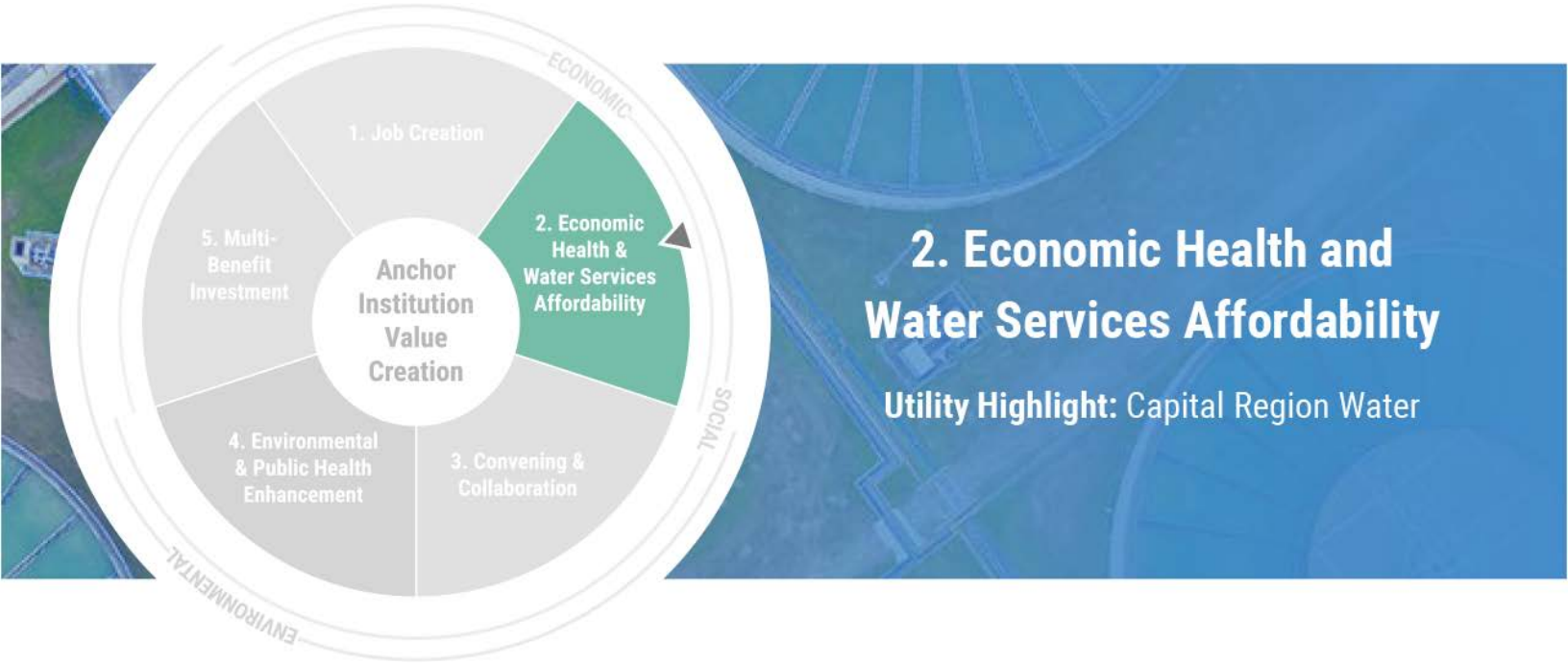
Figure 3: Job Creation Range of Practice

Job Creation & Equity

On average, water workers tend to be older than the national average and lack gender and racial diversity in certain occupations. As important job creators in their communities, utilities have the opportunity to create meaningful job opportunities and address barriers to recruiting and retaining a diverse workforce.

Innovative utilities across the country are creating programs that recruit, train, and cultivate target populations (e.g., at-risk youth, formerly incarcerated individuals, people who speak English as a second language). Many water utilities are evaluating their procurement and hiring practices to understand where barriers to employment equity exist, as well as to create education, outreach, and apprenticeship programs to make their workforce pipeline more equitable and diverse. As a utility broadens its job creation practice, it will seek to understand and to address policies, programs, and practices that underpin hiring, employment, and contracting inequities.

EPA is committed to ensuring that our water workforce is diverse, supported, and equipped to take on the myriad challenges facing the water sector. More information about EPA's Water Workforce Initiative is available at https://www.epa.gov/sustainable-water-infrastructure/water-sector-workforce.



Overview

Every day, more than 50,000 drinking water systems distribute 39 billion gallons of potable water to U.S. homes, industries, and businesses.[8] As discussed in the preceding sections, utilities are able to impact the economic health of their communities through the cost-effective operation and maintenance of their enterprise. Water utilities spend $109 billion as part of their regular business costs each year, and those investments provide a significant opportunity for community economic growth.[9] They also provide the most essential product needed for economic development – reliable, high-quality drinking water and wastewater services. Simply put, access to abundant clean and safe water is a central part of economic growth. Water and wastewater utilities, in their role as water resource stewards, are key players in investing in, enabling, and sustaining the economic health of their community.

Utility Highlight: Capital Region Water

At Capital Region Water (CRW), located in Harrisburg, PA, the provision of affordable water services is a key consideration in all utility operations. Like many older communities across the country, aging infrastructure and deferred maintenance have exacerbated CRW's need for significant financial investment to ensure that safe and reliable services are provided. As rates increase to reflect the true cost of service, affordability challenges increase. The median income of households within the City of Harrisburg is $39,685 with more than 30% of residents earning a median household income less than $25,000. According to the American Community Survey conducted by the U.S. Census Bureau, approximately 30% of households receive supplemental assistance.[10] To ensure utility services remain affordable to low-income residents, CRW has developed a suite of customer

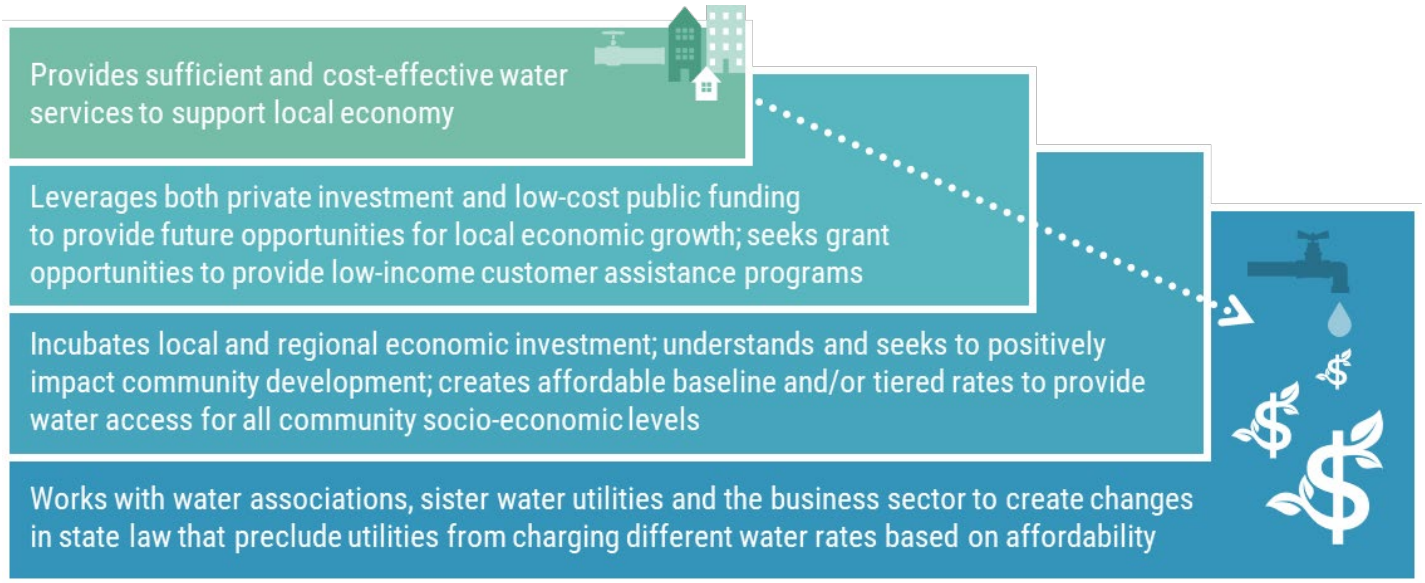
[8] "The Economic Benefits of Investing in Water Infrastructure." (Value of Water, 2020).
[9] "Water Utility Pathways in a Circular Economy." (International Water Association, 2016).
[10] US Census Data Harrisburg, PA. 2015-2019. Available at: https://www.census.gov/acs/www/data/data-tables-and-tools/narrative-profiles/2019/report.php?geotype=place&state=42&place=32800

assistance programs centered around equitable water service access. These programs include credit assistance, payment plans, leak adjustment programs, and a winter shutoff moratorium for those unable to pay bills during the colder months. In July 2020, CRW launched a Customer Assistance Program to help reduce monthly water/wastewater bills for low-income residential customers and those facing hardships. The credit assistance option supports residential customers whose income falls below 150% of the federal poverty level and provides an annual $200 credit to residential customers that meet the qualifying income guidelines. To continually balance customer affordability with deferred maintenance and improvements, the Service Line and Lateral Customer Assistance program is shifting the responsibility of the public roadway portion of the sanitary sewer and water service lateral to CRW. [11] As a result, if there is a leak, blocked pipe, or pipe break on the street portion of the lateral, CRW will be responsible for repairs and associated costs, reducing the burden on low-income residents. Through strategic investment and customer assistance programs such as these, CRW is striving to incubate regional economic investment.

Additional Example Practices

CRW is a utility that seeks to invest in its community while also helping to ensure equitable and affordable rates to all community members and customers. Additional example practices included in Figure 4 demonstrate the different types of practices a utility may choose to implement, starting with setting rates and collecting fees to a more holistic community approach that augments rate setting and fee collection through community-based investment and community involvement. Practices such as these address equitable rate barriers and infrastructure funding challenges. Through strategic investment, utilities are prioritizing equitable water access for all residents.

Figure 4: Economic Health & Water Services Affordability Range of Practice



[11] Capital Region Water Drinking Water Service Line and Wastewater Lateral Assistance Program. 2021. Available at: 2021-01-05-Drinking-Water-Service-Line-and-Wastewater-Lateral-Assistance-Program-Guidance.pdf (capitalregionwater.com)

Equity and Economic Health & Water Services Affordability

Across the United States, low-income households often struggle to afford basic services and are three times more likely to have their water and/or sewer service disconnected than other households.[12] Some utilities are addressing affordability concerns through income-based rate structures and income-based water revenue assistance programs. These programs help avoid water shutoffs and even home foreclosures due to unpaid bills through more affordable water and sewer rates. In turn, utilities benefit from reduced displacement, reduction of building vacancies, and less time spent in collections of unpaid bills and water shutoffs. However, in many states, legislation may restrict the ability of utilities to charge customers different rates based on income/poverty level. Utilities with these restrictions may consider working with legislators to better understand and address these barriers.

Utilities across the country have implemented CAPs that focus on an individual customer's ability to pay for drinking water and wastewater services. In 2016, EPA's review of 795 utilities showed that almost 30% offer one or more CAP options to their customers. These programs address a variety of reasons a customer may have difficulty, from households on a fixed or lower income to those facing a temporary crisis, such as job loss, illness, or other domestic situations. CAPs may reduce a customer's bill, create more flexible terms for payment, create a subsidized rate for a fixed amount of water, help customers on a short-term or one-time basis, or provide financial assistance for leak repairs or water-efficient upgrades. For more information on CAPs, visit EPA's 2016 report, "Drinking Water and Wastewater Utility Customer Assistance Programs."

[12] Drinking Water and Wastewater Utility Customer Assistance Programs (epa.gov)

Overview

Utilities are well-positioned to connect and collaborate with a broad range of partners, including organizations and individuals. On a daily basis, utilities' operations and capital projects require close working relationships with governmental agencies, such as local planning/zoning and transportation boards. As an active enterprise in the community, they are also often large customers for local businesses and other utilities (e.g., gas, electric, cable/telephone). These interdependencies and daily interactions provide a strong basis for utilities to collaborate with stakeholders and partners to raise awareness of utility needs and interests, identify areas of mutual interest or investment, and incorporate the voices of community members into decision-making processes. Meaningful community engagement requires a long-term commitment to, and consistent investment of, time, effort, and resources to listen to and incorporate residents' input. As trusted, long-standing community members, utilities can also convene groups and facilitate building greater trust between community partners. Utilities that prioritize collaboration can effectively harness the thinking, energy, and networks of partners to achieve a greater positive community impact than what a single entity could accomplish alone.

Utility Highlight: The High Line Canal Conservancy

The High Line Canal (Canal) was completed in 1883 as an agricultural irrigation system to support the growing population of the Denver area. This 71-mile-long canal covers over 850 acres and spans 11 governmental jurisdictions. Though the Canal is no longer needed to provide agricultural irrigation for the region, it has become a valuable community resource that provides recreational opportunities to the over 500,000 individuals that use the Canal each year. In addition to recreational and environmental benefits, the Canal has the opportunity to act as an integral part of a stormwater management system for the region.

The collaboration began in 2014 with a feasibility study to determine the ability of the Canal to provide stormwater runoff reduction and treatment and to reduce flooding during major storm events. Once the significant potential of

the Canal became evident, the sponsoring organizations funded the High Line Canal Conservancy (Conservancy) to act as a convener to develop collaborative management and a financial and operational model to advance stormwater projects in the Canal. As of late 2020, the effort has completed design on two initial projects with signed agreements in place to begin construction.

The Conservancy serves as a backbone organization for this multi-jurisdictional effort, managing the overall program while providing technical and communications support to partners to ensure that project work advances. This regional program is designed to facilitate a coordinated investment approach for the Canal that is in line with community and regional goals. This master plan provides the multiple separate jurisdictions with a clear, shared vision of the path forward and a concrete understanding of the costs and interventions needed to fully capture the numerous benefits and economies of scale possible with a shared regional effort.

While improved cost-effective stormwater management for the wastewater service providers and jurisdictions is the most tangible benefit of this collaborative effort, the regular project meetings have built strong relationships among the many partners that live, work, and recreate along the Canal. These relationships keep them aware of the needs, concerns, and priorities of their partners and identify additional opportunities to collaborate and share information across jurisdictional boundaries. Collaboration in a regional program can also be a factor identified by federal and state grants and low-interest loan programs.

Additional Example Practices

The High Line Canal Conservancy, a partnership of 11 jurisdictions, demonstrates how collaborative leadership is key to realizing the potential of an existing 71-mile-long irrigation canal to provide stormwater conveyance in the Denver area. Similar to the High Line Canal Conservancy, water utilities across the county act as important convenors and partners. Figure 5 includes examples of progression from direct actions an individual employee may take to a broader approach that advances partnerships around specific initiatives and creates a more sustained state of engagement to advance utility, partner, and community objectives.

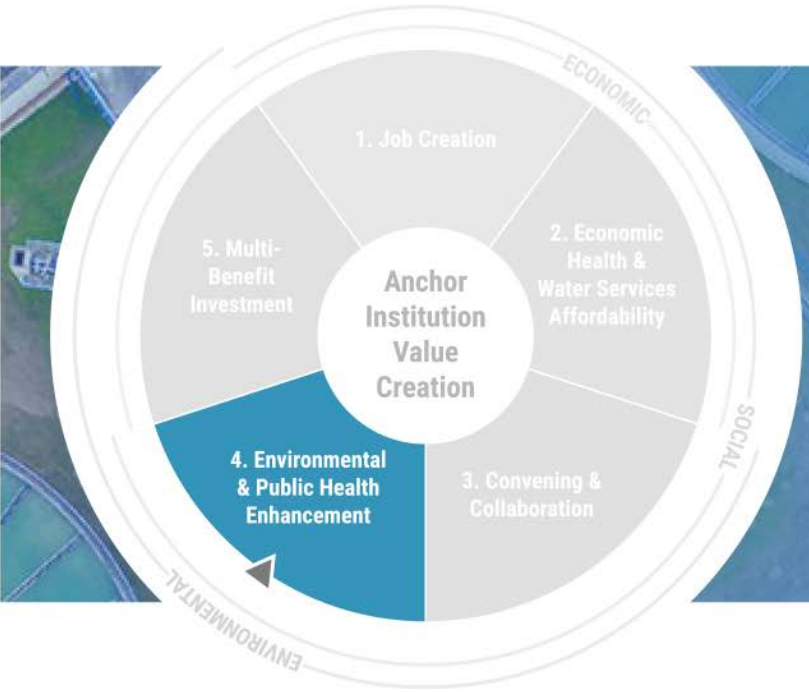
Figure 5: Convening and Collaboration Range of Practice

Equity, Convening, and Collaboration

Anchor utilities often have access to resources that can be shared with others to advance equity within the community. A utility may lend employees' time and skills or provide utility expertise to help community-based organizations that may not have needed expertise in-house, or a utility may offer the utility's buildings or meeting rooms to provide a gathering space for community meetings. Anchor utilities can also expand their understanding of community perspectives through a structured engagement process. Anchor utilities understand that trust is built on consistent, transparent communication, such as sharing what decisions have already been made and then incorporating community feedback.

EPA recognizes that utility operations and investments are best made when they meaningfully engage with the community and consider community perspectives. EPA developed resources that can aid in community engagement and relationship building. For more information visit: EPA's Environmental Justice Primer or EPA's Environmental Justice Collaborative Problem-Solving Model.[13,14]

[13] EPA Environmental Justice Collaborative Problem-Solving Model. cps-manual-12-27-06.pdf (epa.gov). (2008).
[14] EPA Environmental Justice Primer Environmental Justice Primer for Ports: The Good Neighbor Guide to Building Partnerships and Social Equity with Communities (EPA-420-B-20-007, March 2020). (2020).



4. Environmental & Public Health Enhancement

Utility Highlight: The Beckley Sanitary Board

Overview

Drinking water and wastewater utilities are on the frontlines of protecting human health and the environment, and they play a pivotal role in the stewardship of local natural resources. Every year, scientific and technological advancements help the water services sector better understand and measure the relationship between water services, human health, and ecosystem function. Utilities that proactively enhance the well-being of their community and the natural environment are better positioned to adapt when challenges arise, such as emerging contaminants or increasing water scarcity. A wastewater utility may also be part of an "early warning system" to the local health community and the public in the event of a pandemic. Finally, utilities may play a role in providing recreational opportunities to foster community connection with the surrounding environment, spurring conservation action and awareness.

Utility Highlight: Beckley Sanitary Board

The Beckley Sanitary Board (BSB) is a wastewater and stormwater utility serving the greater Beckley area in West Virginia. In 2004, BSB began to think strategically about the most effective way to achieve compliance with regulations that required them to develop and implement a stormwater management program to protect and restore water quality. Given the wide variety of pollutant sources and pathways impacting water quality, BSB knew that a utility-only approach would fall short of achieving the mandated water quality goals. BSB knew that they were only one part of a larger watershed, and stormwater runoff was impacting local streams and the surrounding environment. BSB used this shared concern around stream health to build a relationship with the Piney Creek Watershed Association (PCWA), a local non-profit founded in 2004 by a small group of concerned citizens. Together, BSB and PCWA report that they were able to consolidate efforts, galvanizing volunteers and needed funding to cleanup streams, monitor water quality, mark storm drains, and lead environmental education and outreach programs. As the program evolved, more community members became aware of the way their watershed

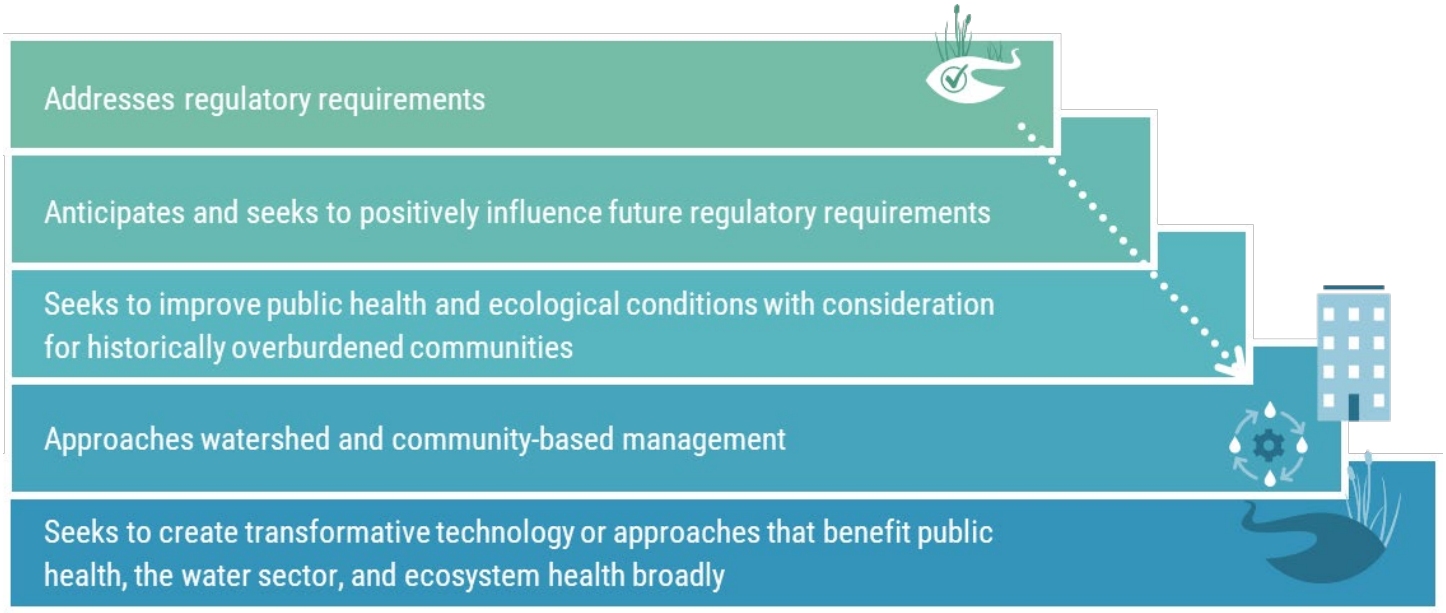
functions and its environmental benefits, including enhanced recreational opportunities, resulting from the cleanup effort. As part of this effort, PCWA and the City of Beckley, with the cooperation of private property owners, developed a trail network of more than 20 miles of restored and connected recreational trails alongside Piney Creek. BSB has also led strategic planning efforts to explore utilizing existing sanitary sewer rights of way as trails to enhance recreational opportunities and better connect the community to its streams.

After BSB and PCWA completed the initial cleanup and trail restoration, the collaboration between the two organizations has continued and PWCA remains a key partner to achieving BSB's water quality targets. In 2011, BSB assisted PCWA in the drafting of a watershed-based plan to identify and address sites affected by sources they identified as septic failures or agricultural pollution. As of 2020, BSB continues to provide funding and share technical resources and expertise with PCWA to help it secure and manage grant funding for conservation programs in the watershed. BSB's collaboration with the PCWA evolved out of a need to meet regulatory compliance (MS4 permit) and engaged the public in the implementation of a stormwater management program. Although the collaboration's original intent was to facilitate behavior change and address pollutants, the partnership has provided much more than originally envisioned and has resulted in a wide variety of community benefits. The effort generated multiple benefits, which in turn fostered goodwill and fundamentally improved the value residents placed on water. Such changes created an atmosphere of success for BSB's watershed improvement mission.

Additional Example Practices

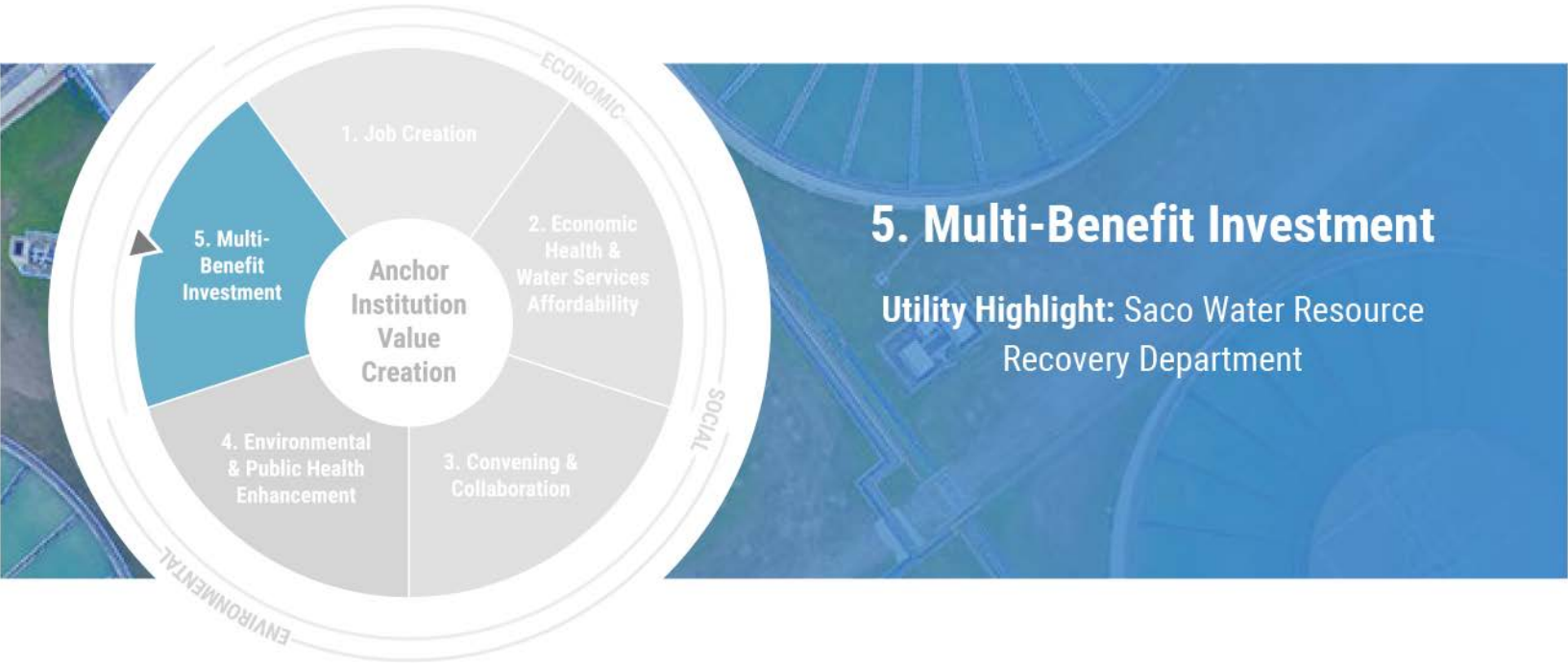
The BSB harnessed the power of community participation to significantly improve watershed protection while creating public recreation and education. While individual practices may vary with each utility's unique context, utilities across the country have many opportunities to positively impact their community's environment and public health. A range of example practices are included in Figure 6, which show a progression from day-to-day practice to inviting broader community involvement and a wider watershed-based approach.

Figure 6: Environmental Enhancement Range of Practice



Equity, Public Health, and the Environment

In the United States, rural communities, low-income communities, and communities of color can experience greater environmental and health risks than the general population. These communities are more likely to live in areas with greater air pollution or in closer proximity to hazardous substances; also they can be less likely to have access to natural environments, such as well-maintained parks. Water utilities can play an active role in reducing existing environmental and public health disparities by assessing and addressing the unequal benefits and burdens of utility operations (e.g., siting of infrastructure, noise, odor, or air pollution). They can plan for future investments that address disparities and pursue options like green infrastructure that provide parks and rain gardens for public use and help manage stormwater. Anchor utilities committed to working toward environmental justice will also seek to create meaningful relationships within communities to ensure their perspectives and priorities are a part of the decision-making processes.



Overview

Utilities across the country are often faced with the need to plan for significant investments such as major facility upgrades, long-term control plan implementation, and comprehensive master plans. These are typically necessary to address environmental and public health regulations, aging infrastructure, operational optimization, as well as to increase resiliency to the impacts of climate change. These capital projects often represent a significant financial investment for a utility and community. They can also offer a valuable opportunity for a utility to support multiple utility and community goals by considering the full range of economic, social, and environmental benefits. Through collaboration with the community and a multi-benefit approach, utilities are better able to serve the multiple needs of both the utility and the community to ensure the best use of often limited financial resources.

Utility Highlight: Saco Water Resource Recovery Department

Saco Water Resource Recovery Department (WRRD) is a utility on the Saco River in Maine that serves almost 12,000 residents and more than 375 businesses. The facility's location and gravity-dependent wastewater system leave it vulnerable to intermittent flooding during high tides, periods of high precipitation, and storm surges. The intermittent flooding threatens WRRD's ability to operate within regulatory requirements.

In 2019, following another high-water event, WRRD began the development of a Long-Term Resiliency Plan (LTRP) to protect the plant from flooding concerns and to establish a resilient path forward to address site constraints, aging infrastructure, and population growth. The overarching goal of the LTRP is to ensure that WRRD can provide high-quality, reliable sewer services to the City of Saco. WRRD leadership recognized that the LTRP was an excellent opportunity to engage with the community to gain an understanding of community priorities, to elevate community understanding of the project, and to support a plan that will require a significant financial commitment from the city and its residents.

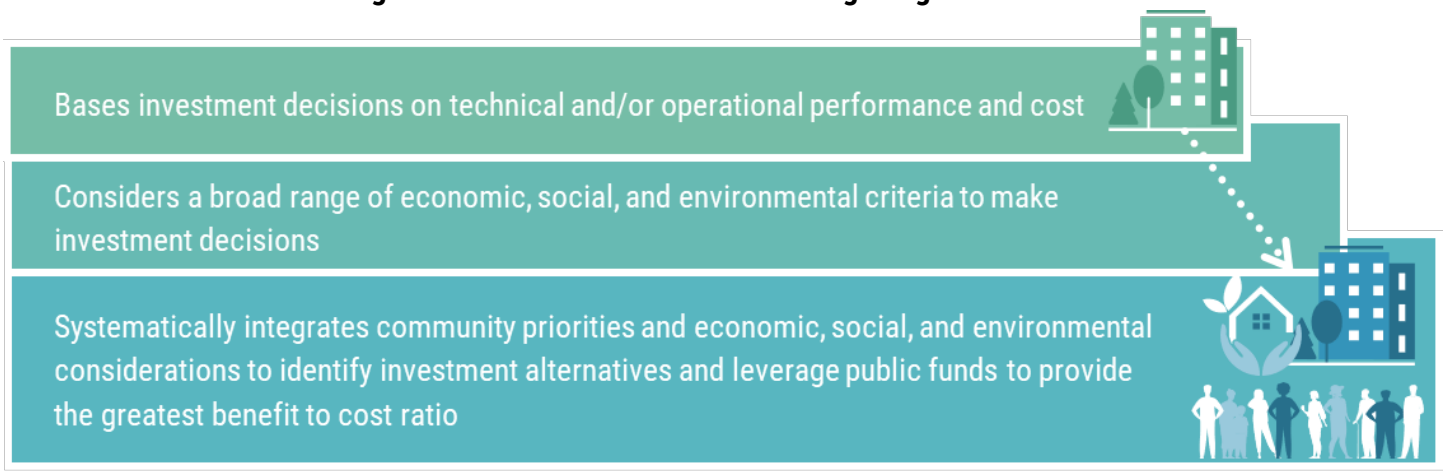
To effectively engage the community in its technical planning process, WRRD used EPA's Augmented Alternatives Analysis method. [15] This method helps utilities evaluate the full range of social, environmental, and economic benefits that investments can create, and provides a common ground for utilities and their communities to communicate solutions. As part of this effort, WRRD created a Coastal Resiliency Committee (Committee) composed of a diverse group of stakeholders, including, but not limited to, environmental groups, city council, the maritime industry, and consulting firms – many of whom have roots within the Saco community. WRRD first worked with the Committee to develop a set of community priorities. The priorities are to improve system resiliency, ensure financial sustainability, improve ecological and environmental health, increase public awareness and appreciation of the value of water services, and bolster community livability. WRRD used these community priorities to develop specific goals for the LTRP.

In spring 2021, WRRD evaluated potential LTRP project alternatives based on their performance relative to the community-informed project goals and presented their results to the Committee. WRRD further plans to bring the Committee together periodically to provide updates and to gather input on the LTRP process. The community's goal is to identify an investment package that addresses the technical and operational needs of WRRD's system while incorporating community priorities to implement a cost-effective solution with the greatest utility and community benefit.

Additional Practices

The WRRD Highlight provides an example of a utility that has integrated community priorities and economic, environmental, and social criteria as key decision-making criteria to guide long-term investment decisions. The range of practices outlined in Figure 7 includes additional example practices a utility may implement to bolster its investment decision-making to achieve a wider range of benefits for their community.

Figure 7: Multi-Benefit Decision Making Range of Practice



[15] https://www.epa.gov/sustainable-water-infrastructure/planning-sustainable-water-infrastructure

Equity and Multi-Benefit Investment

Low-income communities, communities of color, tribal communities, and rural communities can be more likely to experience lower quality public services, negative impacts on business and industry, and impacts of aging or failing infrastructure. Anchor utilities routinely make investment decisions to ensure they can consistently and effectively provide services. These investments represent significant opportunities to positively benefit their community's social, economic, and environmental needs. As utilities begin to expand decision-making criteria to encompass the full range of benefits, they may also consider how addressing equity can be incorporated into decision-making.

There is growing awareness that utility investments provide multiple benefits to the community. Utilities have struggled with a method to quantify and incorporate benefits that are more qualitative in nature, such as some environmental or social benefits. EPA's Augmented Alternatives Analysis method scales economic, environmental, and social benefits to quantify and effectively compare on an "apples to apples" basis to determine the alternative with the highest benefit to cost ratio for both the utility and the community. For more information, visit https://www.epa.gov/sustainable-water-infrastructure/planning-sustainable-water-infrastructure.

Conclusion

Every day, water utilities act as anchor institutions rooted to their location and embracing a long-term commitment to the success of their communities. They positively contribute to the environmental, economic, social well-being, and resiliency of their communities. All across the nation, anchor utilities are creating shared value through strategic activity in their approach to job creation, convening and collaboration, environment and public health, investments, and economic health and water services affordability. Importantly, anchor utilities can help to address inequality and economic, environmental, and social challenges through policies, programs, and practices.

The utilities highlighted within this document provide examples of the meaningful relationships and positive impact utilities achieve in their communities. Together with the community, anchor utilities seek to build capacity and skills and community results well beyond the utility fence lines.

Additional Resources

EPA recognizes that there are many water utility leaders working to better understand and communicate the ways in which water and wastewater utilities can positively contribute to the social, environmental, and economic fabric of their communities. This document is meant to act as one piece of this much larger effort. Below is a starting list of other resources available to those interested in learning more about innovative work being carried out by anchor utilities.

EPA's Sustainable Utility Management Initiative:

- Effective Utility Management
- Making the Right Choices for Your Utility Planning Process
- Making the Right Choices for Your Utility – Case Studies

EPA's Water Sector Workforce Initiative

- Workforce Webinar Series
- Water Utility Workforce Case Studies

EPA's Compendium of U.S. Wastewater Surveillance to Support COVID-19 Public Health Response

EPA's Environmental Justice Primer or EPA's Environmental Justice Collaborative Problem-Solving Model.

For more information on the case study utilities and programs, please visit the following links:

- Beckley Sanitary Board
    - Piney Creek Watershed Association
- Capital Region Water
    - CRW Customer Assistance Programs
- Greater Cincinnati Water Works
- High Line Canal Conservancy
- Saco Water Resources Recovery Department
- Sewerage and Water Board of New Orleans
    - Economically Disadvantaged Business Program
- Utility of the Future

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Tom Sigmund
NEW Water

Tyler Antrup
Sewerage and Water Board of New Orleans

Tyler Richards
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For more information on anchor institutions, please contact:

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[https://www.epa.gov/sustainable-water-infrastructure/water-utilities-anchor-institutions]