# A SUMMARY FROM THE 2021 ASPEN-NICHOLAS WATER FORUM

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## SUMMARY

From the COVID-19 pandemic's profound public health implications to the climate crisis's continued disproportionate impact on low-income communities, water remains front and center of our collective attention. It is clear that water services provide critical public health infrastructure and our collective approach to how we manage these services must occur with a broader focus on equity, affordability, and community.

The rising costs of water services – whether from aging infrastructure, climate change, emerging contaminants, or the COVID-19 pandemic – have placed greater strain on utilities to provide safe, reliable water services at a price that remains affordable for households. Despite these efforts, the average household bill has increased by 5% each year for the last two decades. This is more than twice the pace of inflation and income for many households. Today, it is estimated that between one and three households out of ten are struggling to pay for water services. This is a crisis for both the health of struggling households and the public health of communities.

Neither a community nor a household can survive, let alone thrive, without access to safe, affordable water services. When done well, improving the affordability of water services through an equity lens could create pathways toward addressing legacy infrastructure challenges across the United States and change the trajectory of chronically under-served communities.

This forum focused explicitly on water affordability, which includes utility financial capability and household affordability. Utility financial capability is the ability of the community to collectively cover the costs of infrastructure, operations, maintenance, and debt financing. Household affordability refers to the ability of individual households to pay for basic water services (drinking water and sanitation) without undue hardship. While different, utility financial capability is linked to household affordability because most utilities recover the costs of providing services from their customers – both residential and non-residential. As a result, the financial capability of the system is contingent on the financial health of the customer base, which mirrors the economic segregation occurring throughout the country with the clustering of income and wealth. Not only are households increasingly sorted (i.e., clustered) along economic and racial lines, so too are utilities. These changes are creating an "affordability gap" in the water sector, a growing divide between the communities and households who can afford their water services, and those who cannot.

Addressing the affordability gap at the very least requires finding ways to reduce the costs of providing water services, as well as assisting those without the financial resources to pay for basic water services. The decisions made today – from legislation to infrastructure to how debt is financed – last decades as these systems are woven throughout our communities and as children will inherit all of today's ecosystems, debts, infrastructure, and policies. Thus, making concerted efforts today to address the growing unaffordability of water, and the growing inequities in water access, will have long-term benefits on our communities and our society in the future.

# EMERGING THEMES

## *America's water system works for most households and communities, but has fundamentally failed others*

At the national scale, America's water system has been inordinately successful, providing water services to 87% of Americans (the remainder rely on private wells and septic systems). However, a *growing* proportion of households lack access to water or struggle to afford water services. The success at the national level belies the failure of America's water system at the local level, whether failing to serve specific communities or failing to ensure affordable water services to particular households within communities. Disparities in access to safe, reliable, affordable water services have long historic legacies, which are baked into our current infrastructure.

Infrastructure is built to last decades while populations and businesses can move and change rapidly. There are growing implications for the financial health of water systems as communities have become increasingly sorted along racial, ethnic, and socio-economic lines in many areas. For example, cities in the upper Midwest have experienced large out-migrations of key water-intensive industries that have produced profound ripple effects across communities, economies, and water utilities. The loss of these key anchor tenants has made it difficult to finance infrastructure replacement and attract new growth in these areas. The out-migration of wealthier populations also often results in low-income communities (often disproportionately communities of color) being burdened with higher water rates or with subsidizing the costs of wealthier suburbs developed outside of city limits. These communities are often interdependent in terms of economies and water resources, but the interdependence is rarely acknowledged. Financial resources, policy advancements, and innovations are needed to address these legacies. Capacity must be provided for chronically disinvested communities to be able to access funds that are designed to be equitably shared.

## *Affordability is different from assistance*

Affordability refers to the broader challenges of reducing the rising costs of water services and ensuring households can afford a basic level of services. Assistance refers to the provision of subsidies to households that may or may not make the water bill affordable. While assistance is critically important to address the urgent needs of households who currently cannot afford their bill, it is not a long-term solution and can be a costly one. Assistance also does not guarantee the bill is affordable for the household. A broader affordability approach to assistance would ensure that sufficient aid is given to make water affordable for a household. This year, congress allocated $1.1 billion toward a Low-Income Household Water Assistance Program (LIHWAP), while proposing an investment of $55 billion to address

the broader challenges of water infrastructure and capacity. The costs of water must be reduced at the scale of a watershed or aquifer, utility, and household. An affordability approach must also invest in climate mitigation and disaster resilience to reduce down-gradings of municipal creditworthiness, particularly for those utilities accessing the municipal bond market.

## *There needs to be greater federal involvement and a national policy framework for water affordability*

Addressing water affordability across the U.S. will require significant federal investment. The negative impacts of unaffordable water are felt locally with economic and public health impacts rippling outward to state and federal scales. The federal government has taken an active role in providing financial assistance during the COVID-19 pandemic. The Coronavirus Aid, Relief, and Economic Security (CARES) Act provided local governments with money to assist with rental and utility bills (the majority was used for rental assistance). The Low-Income Household Water Assistance Program (LIHWAP) was created to provide temporary assistance with customer bills. The administration set priorities for utilities to distribute funds to: (1) households that had been disconnected, (2) households at risk of disconnection, and (3) households seeking help with current bills. Despite this assistance, most utilities feel as if the need is still much greater than the resources provided, and that these funds will be fully used by households that have been disconnected or are at risk of disconnection. There are efforts underway to establish a permanent LIHWAP program at the Environmental Protection Agency (EPA), and while Congress has authorized this program for 40 pilot cities, the program remains unfunded.

Beyond funding, there is a need for the federal government to develop a policy framework to ensure cross-sector collaboration and multi-faceted approaches are taken to address affordability challenges at scale. This framework is also necessary to understand how to layer projects and coordinate efforts. Decisions need to be made to ensure money goes to communities in need and in ways that are efficient and bear in mind long-term system sustainability. This includes having conversations and developing the strategies necessary to coordinate and develop integrated, regional approaches that leverage resources between communities and reduce overall costs.

Unfortunately, the federal government is not currently well-equipped to develop such a framework because water management is fragmented federally, which undermines coordinated efforts. A national policy would need to be broad and comprehensive rather than fragmented between government agencies, including programs that provide financial funds based on needs. The fragmented coordination of and applications for these programs creates significant barriers to those looking for and applying to funding programs. The federal government could broaden access by streamlining these programs and creating a more holistic approach that reduces barriers to entry and promotes basin-wide water management.

Utilities expressed both excitement and concern around greater federal involvement. Excitement from the potential of necessary financial assistance, was also matched with concern and confusion around these programs. Utilities would like to see programs such as LIHWAP succeed and address the current barriers to accessing or distributing federal funds to customers. Utilities would like federal funding and policy solutions to provide emergency assistance programs for low-income households and technical assistance so that they can access funding and implement more equitable water rates. There was also a desire for State Revolving Funds (SRF) to prioritize loans and loan forgiveness for projects that are

designed to address affordability challenges without requiring a matching financial contribution. Further, long-term finance programs could be designed to prioritize current inequities in water infrastructure. Perhaps not surprisingly, many were placing hope in the federal government to provide more financial resources.

States also have important roles to play when addressing affordability. States can take some of the onus of affordability off local municipalities by creating statewide bill assistance programs, which is especially helpful for smaller systems. States are also responsible for allocating SRF funding and could establish prioritized funding to low-income communities. States could also incentivize utility partnerships and regional solutions to take advantage of economies of scale and move towards basin-wide solutions.

## *Capacity must be built for disinvested communities to equitably participate in future federal funding*

There were three distinct types of capacity building identified: (1) increased ability to access and distribute federal funds, (2) greater human resources to update and manage data, and (3) assistance elevating needs to local, state, and federal leaders for support.

A recurring theme for many was that the majority of utilities do not have the capacity to navigate federal grant and loan programs to access money or to distribute those funds to their customers in a timely fashion. The capacity required includes technical and financial skills, as well as human resources for small utilities. In short, utilities most in need of assistance are least able to find and apply for that assistance. While the federal government provides some technical assistance for grant applications, these programs are under-utilized. A different approach is needed to connect utilities who need assistance with funds that can meet those needs and lower some of the administrative barriers (such as learning the program, having time to apply, and gathering documentation) that result in shockingly low application rates.

Utilities also need more capacity around data infrastructure. The capacity must be long-term as a skilled workforce is needed to maintain and operate data systems. Similarly, communities that have the capacity to make their needs known to elected officials often get resources. Partnerships between states, utilities, and local governments are crucial to shape and implement new initiatives once needs are known. Communities that are in crisis or chronically struggling to make ends meet do not have the capacity to reach their elected officials and may need help from groups that specialize in bringing their needs to the attention of state officials and those with the ability to meet their needs.

## *Data are needed to understand the scale of affordability challenges and distribute resources equitably*

Data are needed to understand the conditions and challenges facing communities. However, these data are either not collected, not digital, or not accessible. Larger systems may have data but are reluctant to share those data publicly. Smaller systems may lack the capacity to collect data altogether. Utilities may be reluctant to share additional data because the additional value for the utility seems limited given many largely operate independently. However, aggregated data provides insight as to whether the challenges are local or national. Large-scale efforts to reduce lead lines did not happen until there were databases showing lead lines were present in communities across the US.

Data are important not just for broad-level assessments or national inventories; rather, data are needed for many communities to be seen, and are often needed for local, state, and federal officials to address the challenges. Yet finding and obtaining these public data – even simple data such as the number of shutoffs – can be incredibly difficult. For example, Detroit, Michigan saw rates increase by 438% in an area where 40% of the community lives in poverty. Rapid rate increases occurred in part because smaller suburban systems divested from the Detroit system during a period of rapid suburbanization. Data linked those historic policies to current conditions and are needed to draw public attention to these problems and bring to light these disparities and galvanize responses.

The state of California began an intensive data collection effort to understand water system challenges. It was not until the data were collected that the state identified 345 systems that were serving unsafe drinking water to 1 million Californians and that 95% of the violations came from very small systems. These data were necessary for state leaders to act and to provide guidance around how to act, and particularly, where to focus their efforts most efficiently.

Utilities, the collectors of much of these data, may want to share these data more openly. However, public utilities serve the community and operate within governance structures that shape their ability to share data. Utilities may also be reluctant to provide data because they do not have a chance to construct a narrative around the analysis. Data that are shared but not understood or analyzed correctly can erode community trust in the utility or undermine the utility's relationships with other local government leaders. Both scenarios create conflict and barriers to change. Utilities that proactively share data may look to build a network of trusted partners that use data to develop solutions.

## *The transition from funding effort to funding outcomes*

Finance groups, including SRF administrators, make grants and loans available money for projects rather than for achieving a stated goal or outcome. Yet, there are innovations in finance, such as pay-for-success models, that shine a light on how these investors may shift and, in doing so, foster creativity and innovation to emerge in various solution sets. The prioritization of efforts was necessary when we did not have the data and technology available to regulate or manage water any differently. Now it is possible to monitor and manage different approaches to achieving safe water, however. For example, utilities are beginning to invest in natural infrastructure, which is often cheaper than grey infrastructure, to achieve measurable environmental benefits (such as improved water quality, reduced runoff) that meet regulations and achieve other outcomes (such as cleaner air, more community spaces). Innovative companies have worked with EPA and existing authorities to explore new approaches within the existing regulatory framework. A shift towards an analytic approach to meet desired outcomes may enable solutions that improve watershed resiliency at lower costs across sectors.

## *Does our current revenue model work for affordability?*

The federal government subsidized 60% to 70% of the costs of water infrastructure through the 1970s, but today federal funding covers less than 10% of costs. Now, utilities rely primarily on ratepayers to cover the full cost of water services, including legacy debts. State and local governments may increase utility costs by taxing public utilities. These taxes go to the general fund, which can allow elected officials to defer property tax or sale tax increases but increases the costs on the water utility and its customers. Rather than property or sales becoming more expensive, water becomes more expensive.

This raises the question of whether water is financially treated as a public good or a commodity. Some firmly believe water must be treated more like a commodity – where households pay the same amount for the water used in a community – for long-term financial sustainability. While some believe a tax-based model that spreads the costs among property owners is more equitable since households with lower property value will pay a smaller proportion. Each revenue model has both benefits and challenges.

Buffalo, NY implemented a hybrid model where a portion of the costs are recovered through taxes (essentially the fixed charge) and a portion of the costs are recovered through volumetric rates based on water usage. This approach offers greater equity while keeping pricing signals for water conservation. An important flag with this approach is that many of the disinvested, low-income neighborhoods are the highest water users because they have leaky toilets and faucets. The utility is working hard to help those households replace fixtures and fix leaks. Utilities with a property tax revenue model may have a greater ability to get into individual households to address leaks.

## *Regionalization must be part of the affordability solution*

There are nearly 50,000 drinking water systems in the U.S., the vast majority of which serve fewer than 500 customers. Regionalization is needed to reduce fragmentation and reach economies of scale; however, like any tool, it has been used for good and for harm. Conversations around regional collaboration are better received and can entail a whole spectrum of opportunities to lower costs and innovate at broader scales without physically consolidating. For example, the Mayor's Commission on Water Equity in the Great Lakes region formed a collaborative partnership to address common challenges in their communities including the lead in water, affordability challenges, urban flooding, and creating job opportunities in the water workforce. These regular meetings have been crucial to understanding the shared issues facing communities and to work towards broader solutions at scale leveraging each other's assets. Another example is the Hampton Roads Sanitation District, which was created in 1940 as a regional mechanism to reduce pollution in the Chesapeake Bay by providing wholesale treatment services to 14 utilities.

## *Communication, education, trust, persistent leadership, and culture change*

Utilities must be creative to reach their customers to inform them about their assistance options. However, even when utilities do reach customers, they may be reluctant to participate. Many utilities that have implemented CAPs struggle to get customers that need assistance to enroll for many reasons, one of them being a deep mistrust of government. Communities with chronic water challenges often lose trust in their utility and government, which can create barriers to proposed solutions – particularly solutions that involve some form of consolidation. For example, a Delaware community contemplated whether living with contaminated water was better than connecting to a public system.

Education can also create barriers. Residents have a significant lack of knowledge about their municipality and utility. Local governments and utilities must work to educate their citizens and broaden their understanding from short-term impacts to long-term planning to ensure the financial vitality of the community. This requires providing education to citizens about how utilities and utility financing work, especially if decisions to take on a loan – even one that will be forgiven – require a public referendum.

Educational programs can and should begin with the youth. For example, California funded a program for middle school students to plan stormwater projects for their schools. They took pride in designing

projects, creating swales, collecting water quality samples, and so on. They were engaged and understood how these water systems worked.

The water sector needs to prepare the next generation of water utility managers, equipping them with additional training beyond engineering to include humanities, history, diversity, and engagement. This type of training and leadership is needed for utilities to become trusted anchor institutions in the community. Leadership training can and should also begin with the youth. For example, many tribes have intergenerational leadership where the youth learn about their water and are included in the decision-making process.

## *Are we ready for a human right to water?*

The lack of affordability and continued disparity in water quality service across communities has prompted calls call for a human right to water. However, it is unclear what a human right to water means and how to define the right in a way that creates meaningful sustainable change. California was the first state to pass a human right for water in 2012, although New York and Virginia have recently passed rights for each person to clean air and water. The legislation in California has allowed the state to raise money to improve water affordability and equity as well as to collect data to better understand the scale and scope of these challenges. While these are great improvements and resources, many Californians still endure water shutoffs because of an inability to afford their bills and many more are served by systems or private wells with unsafe drinking water. Is a human right to water merely aspirational if utilities are not equipped to provide safe reliable services at affordable costs? Is it economically feasible to run a utility without shutoffs and have rates that meet the costs of service and remain affordable? These are questions that must be raised if we as a society decide to realize a human right to water.