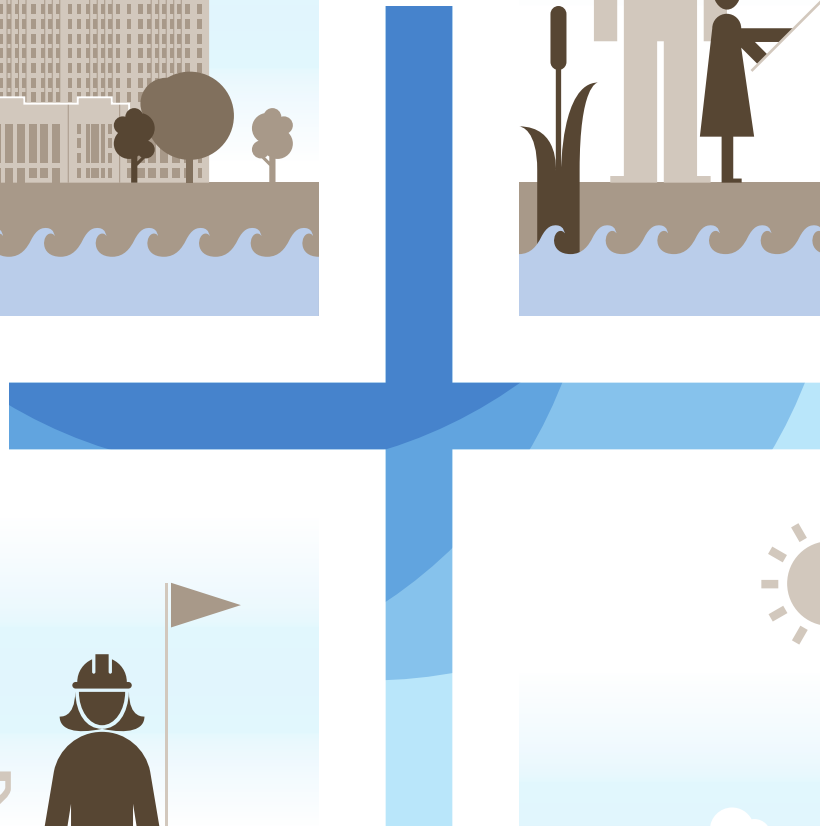
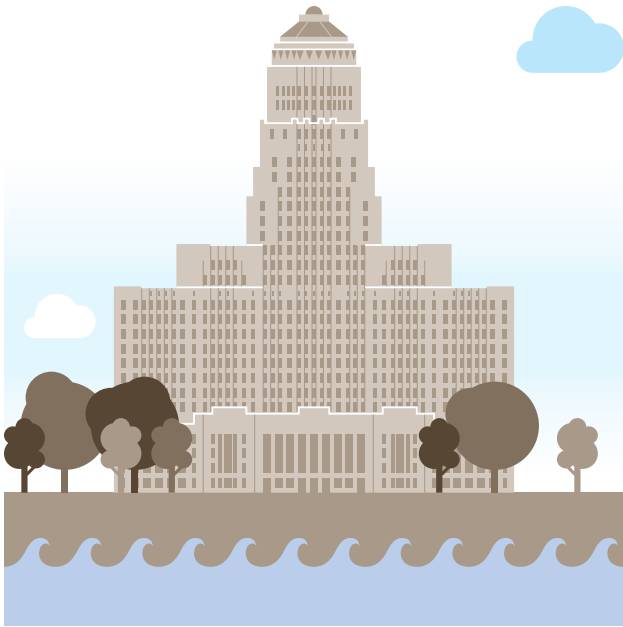


AN EQUITABLE WATER FUTURE

Buffalo





ABOUT THE WATER EQUITY TASKFORCE

Water shapes economic growth, the environment, and the social fabric of our communities. Ensuring that all people have access to safe, reliable, and affordable water and wastewater systems is the cornerstone of a sustainable and prosperous nation. We **all** have a role to play in forging progress.

The Water Equity Taskforce is a network of cities that work together to develop more equitable water policies and practices. Convened by the US Water Alliance—and comprised of cross-sector teams in the cities of Atlanta, Buffalo, Camden, Cleveland, Louisville, Milwaukee, and Pittsburgh—this initiative is advancing understanding of the challenges, opportunities, and promising interventions to promote equitable water management.

Buffalo’s Water Equity Taskforce brings utility managers, community representatives, and local philanthropy to a shared table. The team developed this report as a call to action to align the resources and capacities of a range of stakeholders to advance equity and inclusion in Buffalo through smart water management.

Buffalo Water Equity Taskforce



ACKNOWLEDGMENTS

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INTRODUCTION

Buffalo's history has been shaped by its relationship to water. In the 19th century, Buffalo became one of the country's major trade hubs thanks to its proximity to Lake Erie and the Erie Canal. The region's leaders have long understood that water is essential to the city's environmental, social, and cultural fabric, and have a proven track record of working together to protect and preserve water resources.

However, the city's water future faces a range of challenges, from the quality of the Great Lakes Waterway to climate impacts to aging systems in need of continued investment. As an older industrial city that has weathered both economic shifts and population decline, Buffalo has many vulnerable communities that are disproportionately impacted by infrastructure, economic development, and environmental issues. Historically, marginalized groups are the hardest hit by a range of water challenges.

To secure a sustainable and prosperous future, stakeholders in Buffalo must build upon their shared values and deepen their focus on fostering equity and inclusion in water management. Water policies and practices must serve the needs of vulnerable residents, allowing the city and its people to reach their full potential.

This report is organized in the following manner: it begins with a description of Buffalo's demographics and socioeconomic context and goes on to discuss critical topics in water equity. These include affordability, water quality, infrastructure, workforce development, and waterfronts. For each of these topics, the report sums up the challenges, describes promising practices that are currently underway, and highlights a priority action that stakeholders in Buffalo can take to advance equitable water management.

BACKGROUND

Understanding Buffalo's history and demographic landscape is crucial to advancing equitable water management because water challenges are deeply connected to spatial, economic, environmental, and social conditions.

The city has many assets it can draw upon to create a more equitable water future. People of color and immigrants are leading population and economic growth in Buffalo, thereby increasing ethnic and racial diversity. The region has a strong ecosystem of local organizations working towards socioeconomic equity and environmental quality. At the same time, many lower-income people and communities of color live with segregation and poverty. Reversing the historic conditions that have led to population decline, industrial pollution, and concentrated poverty will be a long-term task, but equitable water management can contribute greatly to an inclusive future for Buffalo.

As of 2017, Buffalo's population was estimated at 259,574.¹ The city's population has generally declined since it peaked at 580,000 in 1950, almost 70 years ago, when Buffalo was the 15th largest city in the country.² Population decline has transformed the built environment of the city, leaving neighborhoods with swaths of vacant homes and empty lots. It has necessitated changes to water infrastructure capacity to serve smaller populations.

While the overall population has declined, the percentages of Black, Hispanic or Latinx, and Asian residents have grown since 1980. Buffalo became a majority-minority city between 2000 and 2010, and the immigrant population increased during the same period.³ White, non-Hispanic individuals currently make up approximately 44 percent of the population, and Black and Hispanic or Latinx individuals make up 37 and 11 percent, respectively.⁴

People of color are much more likely than their white counterparts to live in poverty, and poverty is geographically concentrated in Buffalo. Across Buffalo, 19 percent of White individuals live in poverty, compared to 37 percent of Black individuals, 46 percent of Hispanics or Latinxs, and 46 percent of Asians.⁵ This is important in understanding water equity because race and ethnicity are strongly

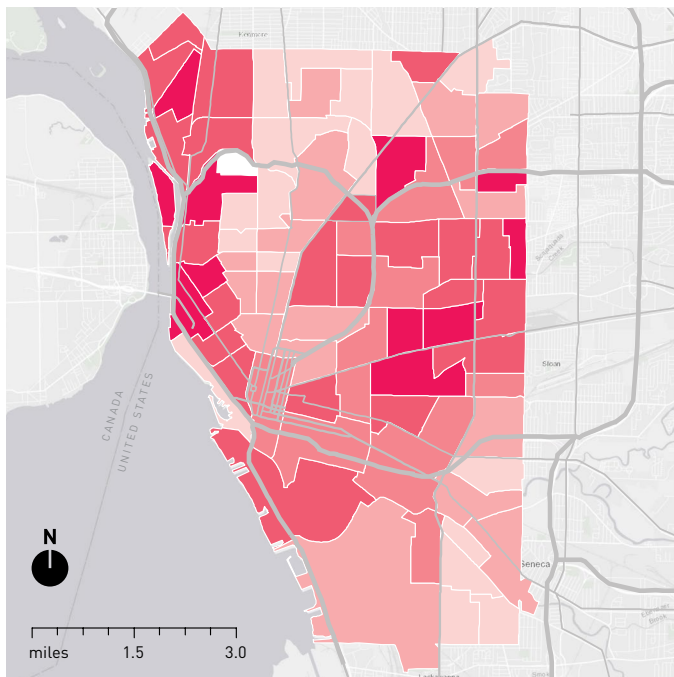
correlated with health disparities, exposure to environmental hazards, and vulnerability to natural hazards.⁶

Buffalo's vulnerable communities are facing significant water challenges. At the same time, there are many opportunities for a range of stakeholders to create more equitable water management practices and strengthen the city. Buffalo's diversity is one of its greatest strengths, and working towards greater equity will have widespread benefits. According to a recent study, closing the racial equity gap in Buffalo would significantly grow the economy, creating billions of dollars in wealth for families and growing the region's GDP.⁷ Addressing disparities in water systems is a key component of creating a more equitable, prosperous Buffalo.

Buffalo has a strong network of community-based organizations and government agencies that have developed promising practices to address inequity and create opportunity. In developing more equitable water systems, the city can build on and expand these successful examples. The following topics are arenas where progress is being made, and where strategic initiatives can accelerate positive change.

Percent population below poverty level by census tract, Buffalo, 2017.

< 17% 17%–27% 27%–36% 36%–45% 45% >



Source: PolicyLink/USC Program for Environmental and Regional Equity analysis of data from the U.S. Census Bureau, 2017 American Community Survey 5-Year Estimates. Areas in white are missing data.

AFFORDABILITY

Challenges

Buffalo's drinking water and wastewater utilities—the Buffalo Water Board (Buffalo Water) and Buffalo Sewer Authority (Buffalo Sewer), work to balance customer rates and the need for public health infrastructure investment. Both drinking water and sewer rates are unaffordable to some segments of the population, especially those on fixed incomes, like the elderly or low-income individuals.

There are significant subsets of the population with economic challenges, and these populations are the most likely to be forced to decide between paying their water bills and paying for other necessities. This situation is exacerbated by rising rents and other utility expenses like heating bills. Many Buffalo residents face housing cost burdens, meaning that 30 percent or more of their income goes towards housing.⁸ Residents may be forced to make sacrifices in other aspects of their life to pay for housing costs, such as choosing between utilities, food, or healthcare.

Whether they rent or own, housing costs burden people of color at a higher rate than White individuals. In Buffalo, approximately 60 percent of Black renters and 61.4 percent of Latinx renters spent more than 30 percent of their monthly income on housing costs between 2011 and 2015, compared to 44.9 percent of White renters.⁹ Close to 32 percent of people of color were housing cost burdened in 2015, while only 16.9 percent of White homeowners spent more than 30 percent of their household income on housing costs.¹⁰

Combined drinking water and sewer rates in Buffalo average approximately two percent of residents' average income, or about \$170 per three-month period, as of January 2019. Sewer rates are based on property values and consumption of water.¹¹ This rate structure poses an affordability problem for residents when their financial circumstances change, such as moving to a fixed income, changing jobs, or losing a source of income.

As of 2018, there were approximately 1,330 Buffalo Water accounts on payment plans, and the average outstanding balance per account was \$1,131.23. Unpaid bills can lead to shutoffs, and defaulted customers who have not paid their water bill may have an automatic lien placed on their property.

Promising Practices

Buffalo’s Water and Sewer utilities recognize the burden that rates can pose for historically marginalized communities and the need to keep services affordable. The utilities currently offer several customer assistance programs, including a discount of up to 50 percent for low-income seniors that own homes. They also offer a leak abatement program, which forgives large bills due to leaks if repairs are made.

While Buffalo Sewer has not raised rates since 2005, Buffalo Water implemented a rate increase in January 2019 to support investment in infrastructure maintenance. This rate adjustment provided an opportunity to expand existing affordability measures and inform customers about these resources, ensuring that the increase does not exacerbate disparities between those who are able to afford higher water rates and populations that are not. Many eligible customers are not yet enrolled in existing assistance programs and would benefit from more awareness regarding what is available. Buffalo Water has a Residential Affordable Water Program that provides assistance of at least a \$60 per year discount to qualifying low-income residents.¹² Buffalo Water put out a request for proposal for an education and outreach initiative to increase low-income resident enrollment in the program.

Priority Action:

Collaborate with local organizations to engage communities and approach affordability holistically

As Buffalo’s utilities develop a program to ensure that water and sewer rates are affordable for vulnerable communities, they can partner with organizations that are familiar with these communities’ needs, such as Neighborhood Housing Services and other organizations focused on housing, energy, or social services. For example, PUSH Buffalo, a housing organization, works closely with disinvested neighborhoods and vulnerable populations on initiatives like green infrastructure and equitable economic development. Community organizations understand water cost burden holistically—as one

of many costs, including high energy cost burdens. They are well-suited to conduct outreach around service programs and assist with applications and enrollment. This approach makes it clear that water assistance programs are one of many strategies that can make housing conditions safer, healthier, and more affordable, including energy cost assistance, efficient fixtures, weatherization programs, and lead service line removal.

Rolling out a water affordability program is also an opportunity to reduce the bureaucratic burden on applicants and streamline the process of enrolling in other essential services. Many residents who are eligible for water rate assistance also qualify for energy and food assistance programs and would benefit from services like home water and energy efficiency audits. Buffalo’s utilities can partner to create a one-stop shop where low-income residents can enroll in a range of services and programs. Community organization partners can assist in identifying events and venues for raising awareness of these programs and increasing enrollment. Buffalo’s Green and Healthy Homes Initiative, which helps make homes safer and more energy efficient, could partner with the city’s utilities to connect residents to water utility programs.

Typical residential water bills in the Residential Affordable Water Program, 2019.

2018 Residential Customer



Current Residential Customer



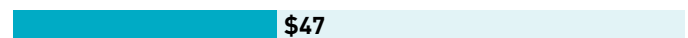
Low Income RAWP Customer



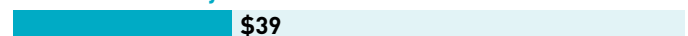
Very Low Income RAWP Customer



Senior Citizen Low Income RAWP Customer



Senior Citizen Very Low Income RAWP Customer



Note: Numbers based on average approximate residential water usage of 17,500 gallons/quarter (2,312 CF/quarter).

WATER QUALITY

Challenges

Buffalo's drinking water meets required quality and safety standards when it leaves the treatment plant and is distributed through the city's water mains. However, some lead remains in privately-owned service lines where homeowners are not aware of the issue or cannot afford to replace the lines. While the lead levels in children's blood have decreased in the last decade, children living in lower-income neighborhoods are still much more likely to get lead poisoning than children in higher-income neighborhoods.¹³ Lead exposure is primarily caused by the presence of lead paint in old housing stock, but lead in water lines could exacerbate the problem. It is imperative to remove lead service lines and fixtures to prevent any contamination, especially when children are already potentially exposed to lead paint. Addressing this issue is challenging because lead service lines and fixtures on private property are the homeowner's responsibility. However, the utility can take steps to protect public health by helping property owners reduce their risk. Renters may be at particular risk of exposure because they have less information about the presence of lead on the property.

Promising Practices

Buffalo Water is committed to ensuring the public health of residents by protecting them from lead poisoning through tap water consumption. In 2016, Mayor Byron W. Brown established a lead action limit of 5ppb, significantly less than the US Environmental Protection Agency's 15ppb. Under the city's ROLL (Replace Old Lead Lines) program, dozens of private lead service lines have been replaced as Buffalo Water has dedicated over \$500,000 to this effort. In 2017, the city partnered with the University at Buffalo to unveil a state-of-the-art pipe loop system to investigate water quality and to ensure optimization of corrosion control treatment, significantly reducing the likelihood of lead concerns at the tap. In 2018, Buffalo Water began partnering with Virginia Tech, Washington University (St. Louis), and the University at Buffalo to perform advanced laboratory analysis of harvested lead service lines to further guide in the optimization of

corrosion control treatment. The efforts to date, which include increased monitoring, enhanced sampling, and directed community outreach, have protected public health and helped eliminate lead service lines throughout the city.

Priority Action:

Leverage state funding and regulation to address lead risks

Buffalo Water's dedicated funding for lead service lines sets an important precedent for utilities assisting homeowners in addressing this risk. Identifying and removing lead lines is a very expensive process, and the city and its partners are exploring additional funding options to supplement Buffalo Water's funds.

There are several state-level funding sources that could be used for lead service line removal. First, State Revolving Funds (SRFs) may be an option. While SRFs are often loans, they can be offered as grants for economically-distressed municipalities. Buffalo may be able to qualify for SRFs that are primarily grants to replace lead service lines. The city also receives funding from the Community Development Block Grant entitlement program, some of which could potentially be applied to lead removal. In 2017 New York state passed the Clean Water Infrastructure Act, which allocated \$2.5 billion to clean water infrastructure projects. While Buffalo has already received some funds, it could apply for more since the program has been undersubscribed. Finally, the state has an Environmental Protection Fund generated by bottle deposits. Buffalo stakeholders could advocate for some of this funding to go towards lead service line removal.

Ensuring that renters are well-informed about the presence of lead in their homes is another step that can help reduce exposure. Transparency about lead empowers residents to take action to protect their health by advocating for the removal of lines and fixtures. New York state requires sellers to disclose whether there is lead plumbing in the home and where components are located.¹⁴ Local stakeholders can help ensure that this policy is being enforced and that residents are aware of it. They can also advocate for a similar disclosure policy in rental agreements to inform tenants of the presence of lead.

INFRASTRUCTURE

Challenges

Buffalo has a combined sewer and stormwater system that can overflow during storms, causing concern to the city and wider region. There are 52 overflow points throughout Buffalo's 850-mile sewer system. Sewer overflows threaten water quality, especially for those populations who depend on fish from the rivers for food. With more extreme storm events causing the release of untreated wastewater into waterways, investment in green, gray, and smart infrastructure is necessary to improve sewer systems and prevent water quality issues.

Obtaining funding for infrastructure improvements is a challenge. Decreases in the federal government's contribution to water infrastructure spending over the past 40 years have made system maintenance challenging for utilities. Federal spending on water infrastructure fell from \$76 per person in 1977 to \$11 per person in 2014.¹⁵ Many treatment plants have had as-needed repairs but have not had major updates in decades.

Promising Practices

As part of Buffalo's Long-Term Control Plan, which was approved by state and federal regulatory agencies in 2014, Buffalo Sewer and the City of Buffalo committed to investing \$380 million over 20 years on projects to reduce combined sewer overflows into local waterways. In 2015, Buffalo Sewer officially launched Rain Check, Buffalo's green infrastructure program. Rain Check aims to protect and restore the health of Buffalo's waterways by addressing stormwater runoff. The release of Buffalo Sewer's Rain Check 1.0 report describes the city's stormwater challenge, the unique role green infrastructure plays in addressing it, what has been done so far, and how the city will take green infrastructure to the next level.¹⁶ The first generation of green infrastructure investments concentrated on areas of the environment that created the most runoff from stormwater—streets, parking lots, and roofs. Green infrastructure investments throughout the city include the implementation of green streets, green parking lots, demolitions, and rain barrels/downspout disconnections. Collectively, these investments have the potential to keep nearly 17.5 million gallons of water from entering the underground sewer system during a typical rainfall event.

Rain barrel and downspout disconnection. *Photo credit: Rain Check Buffalo.*



Buffalo Sewer's Rain Check report. *Photo credit: Rain Check Buffalo.*



Launched in 2018, Rain Check 2.0 represents the next generation of Buffalo Sewer’s green infrastructure program. This phase of the program will focus green infrastructure investments in six sewer basins. Unlike Rain Check 1.0, which focused investments in the public domain, Rain Check 2.0 will be broader—expanding public partnerships and exploring more private partnerships.¹⁷ This effort may involve partnering with large and small property owners, local colleges and schools, religious institutions, nonprofit agencies, housing authorities, and even residents.

Priority Action:

Leverage rate increases for infrastructure investment to create multiple community benefits

Buffalo Water’s rate increase will provide much-needed funding to improve the city’s water infrastructure. The city can use these investments as an opportunity to intentionally implement arts and culture strategies to create triple bottom line benefits for vulnerable communities. Water infrastructure—from storm drains and pump stations to water towers and treatment plants—can be more aesthetically integrated into the physical and cultural landscape of a city through partnerships with local organizations. Not only can this create more appealing public spaces, it can also foster a deeper understanding of water infrastructure and resources, as well as strengthen the community’s relationship to its utility.

Investments in infrastructure can tie in to economic development initiatives, like workforce development projects to train Buffalo’s future skilled workers, and contracting and procurement programs to support local small business or minority- and women-owned business enterprises (MWBES). Buffalo Sewer requires contractors and consultants to take affirmative steps to meet MWBE goals for projects. Large contracts could be broken into smaller contracts to make it easier for small businesses and MWBEs to bid for such work.

WORKFORCE DEVELOPMENT

Challenges

Like many cities in the Great Lakes region, Buffalo has been affected by the decline of the manufacturing industry since the 1950s. The city lost close to 43 percent of manufacturing jobs between 2000 and 2010.¹⁸ The healthcare, education, and government sectors grew in that period and filled in some of the gaps left by manufacturing, but total employment has grown slowly. In 2017, approximately 30 percent of the population between 16 and 64 years old did not work.¹⁹

There are stark differences in unemployment rates by race and ethnicity. The estimated rates of unemployment for African Americans and Hispanic or Latinx residents in 2017 were 14.5 and 8.5 percent, respectively. In contrast, approximately 5.6 percent of Whites and 3.6 percent of Asians were unemployed.²⁰ Additionally, the income gap between white people and people of color has increased in the last 25 years.²¹ In 2013, median income for White households was \$71,622—more than twice as much as the median household income for people of color, which was \$33,061.²² Income inequality means that some communities of color may face difficulties in paying for water services and dealing with water issues.

Training Buffalo’s future workforce is crucial to the city’s long-term prosperity. By 2020, an estimated 51 percent of jobs in Buffalo will require an associate’s degree or higher.²³ As of 2017, an estimated 35.6 percent of Buffalo’s population over the age of 25 meets that requirement.²⁴ Nearly two-thirds of Buffalo’s adult population lack the educational qualifications required for half of the jobs that will be available in 2020. At the same time, the city is making significant investments in infrastructure, creating an opportunity to connect underemployed communities with water sector jobs.

Promising Practices

Buffalo Sewer's initiatives support ongoing efforts to build greater equity in the region. Thousands of individuals and companies have signed Mayor Byron W. Brown's City of Buffalo Opportunity Pledge²⁵ to help build a culture of equity and inclusion across the city. As workforce is critical to the city's ongoing success, since 2006, Buffalo Sewer has been effective at enhancing its workforce and advancing inclusionary practices. In 2006, African Americans and Hispanics or Latinxs represented only five percent of the workforce and none of the executive leadership. In contrast, as of January 2019, African Americans and Hispanics or Latinxs made up 32 percent of the workforce (a 400 percent increase since 2006) and 44 percent of the executive leadership. The deliberate efforts to transform Buffalo Sewer, integrating diversity and inclusionary practices, has fostered equity throughout the local workforce. This was accomplished through outreach programs, public meetings, block club events, partnering with religious institutions, collegiate recruitment, and in-house training programs available to the public. Recruitment efforts gained traction as local stakeholders began to see a change, not only in the diversity of staff, but in the positions that they held. Buffalo Sewer is continuing to ensure that the diversity of their staff and executives reflects that of the population of the city.

Priority Action:

Coordinate regional workforce opportunities in related sectors

Buffalo's investments in water infrastructure are an opportunity to create employment, but utilities alone can only hire so many people. Water sector leaders can coordinate with related sectors like energy and transportation to create shared trainings, recruitment strategies, and equity metrics.

For example, the Northland Workforce Training Center opened in early 2018 and is the workforce development component of New York Governor Andrew Cuomo's Buffalo Billion initiative, a \$1 billion-dollar investment in the economy of the Buffalo area to create jobs and attract development. The Center is dedicated to "providing specialized training for advanced manufacturing and energy careers."²⁶

Buffalo Water and Buffalo Sewer could also partner with regional and state entities, such as the New York Power Authority, to see what areas they forecast for job growth in hydroelectric plants and other water-related industries and to create partnerships for a large-scale workforce development initiative. In these workforce development initiatives, it is important to target them to the more vulnerable populations, such as the unemployed, those who do not have degrees, homeless people, and formerly incarcerated people.

WATERFRONTS

Challenges

Public waterfronts can provide open space, recreation, and food sources for residents. Contamination in water and the land near water bodies can make waterfronts less safe and less appealing as public spaces. Some residents, especially New Americans and low-income populations, rely on fishing as a major source of food. Contaminated waters threaten the health of fish and the people who eat them. These populations may not have accurate information about contaminants and related limits to fish consumption.

Deindustrialized waterfronts are one of the few remaining lands available to develop more open space in cities. Buffalo has already engaged in significant waterfront investment, but there is still community demand to open up more of Buffalo's waterfronts and waterways to recreation and open space. This can also spread the acreage of open space throughout Buffalo, reaching vulnerable communities that lack access to parks. Before this can take place, contaminated land must be remediated, which increases the budget and timeline of these types of projects. Additionally, Buffalo should consider how to handle the risk that renewed investment in waterfronts located near low-income neighborhoods could result in rising property values, gentrification, or displacement.

Canalside after redevelopment. *Photo credit: City of Buffalo.*



Promising Practices

Buffalo has undertaken a number of projects to make waterfronts accessible to the public, creating recreational space that is available to all. These projects also spur economic development.

Canalside

In 2006, Buffalo's waterfront was populated by vacant lots and buildings. Since then, the city has reinvented its waterfront the area like Canalside, a nautical-themed park at the mouth of the Erie Canal and source of pride for Buffalo. In 2018, Buffalo celebrated the 10th anniversary of the opening of the restored Erie Canal Harbor, part of a \$53 million waterfront redevelopment project at Canalside. What was once a city-owned parking lot is now Harborcenter, a tourism generator. The site of the former War Memorial Auditorium is the future site of Explore & More Children's Museum at Canalside.

Erie Basin Marina

Buffalo's waterfront is home to America's largest inland naval park, the Buffalo and Erie County Naval & Military Park. Since 2006, Mayor Brown and the City of Buffalo have invested over \$3.7 million into the Erie Basin Marina, which features an observation tower with views of Buffalo and Canada.

Ohio Street

Ohio Street was a key site in the city's industrial development, as the manufacturing industry grew along the Buffalo River in the 19th century. Today, the Ohio Street corridor links Canalside, the Cobblestone District in the Inner Harbor, Gallagher Beach, Wilkeson Point, and Buffalo Harbor Park in the Outer Harbor. The recent conversion of Ohio Street into a waterfront parkway helps link local neighborhoods and residents to the transformation taking place along the waterfront. The streetscape project transformed this underutilized, four-lane commercial roadway into a complete street open to pedestrians, bicyclists, and public transit.

Broderick Park

The City of Buffalo and Mayor Brown contributed \$11 million to the makeover of Broderick Park. The improvements to the park included the Bird Island Pier and the West Ferry Street Bridge—creating a waterfront destination and tourist attraction as a designated Network to Freedom

site by the US National Park Service. The total investment along Niagara Street, the access point to the waterfront on the west side, has been over \$53 million since 2006.

LaSalle Park—the Future Ralph C. Wilson, Jr. Centennial Park

The City of Buffalo is working closely with the Ralph C. Wilson, Jr. Foundation on the largest philanthropic gift in the history of the city. The Foundation's \$100,000 million gift to Buffalo will transform Buffalo's LaSalle Park into the Ralph C. Wilson, Jr. Centennial Park and build a new regional trail system. In 2018, a \$50 million gift was announced for the redesign of LaSalle Park, and Imagine LaSalle was created to ensure that the city park is for everyone. Imagine LaSalle has solicited resident input on the park redesign and is currently exploring designs and concepts through community workshops. The City of Buffalo, the Community Foundation for Greater Buffalo, Buffalo Sewer, and Buffalo Water are partners on this project.

Priority Action:

Develop more waterfront parks to provide multiple benefits

Developing more parks along waterways could provide ecological and physical benefits, such as protecting neighborhoods from flooding during severe storm events and reducing impermeable surfaces and urban runoff. Increased tree cover along waterways would combat the heat island effect, provide shade, sequester carbon, and improve air quality. Such improvements could be combined with a workforce development plan to hire local residents and train them to manage open spaces. Waterfront development can take into account the communities that rely on subsistence fishing and include resources and public education on safe fish consumption.

In order to ensure that waterfront development reflects community needs and desires, utilities can continue to partner with local organizations to determine community priorities. This could involve models like land banking or a community benefits agreement to ensure that new open spaces serve existing communities. Initiatives could build on PUSH Buffalo's work on using green infrastructure in vacant lots to manage stormwater.

CONCLUSION

Building a more equitable water future for Buffalo will require collaboration and commitment by the public, private, and nonprofit sectors. All stakeholders have a role to play, from utilities and government agencies to youth, community organizations, researchers, environmentalists, and residents. The priorities for action described in this report suggest a path forward for all partners. While the challenges are significant, Buffalo stakeholders have the expertise, imagination, and collaborative ability to create a city where all people benefit from safe, affordable water, vibrant waterfronts, and resilient infrastructure.

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One Water, One Future.

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