



WFAM

WATER FOR ALL OF MICHIGAN

Financing and Securing
Access to Safe, Clean, and
Affordable Water for All

Report prepared by:

People's Water Board | Clean Water Action | Michigan Environmental Council | FLOW | Sierra Club



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TABLE OF CONTENTS

- 1. Executive Summary page 1
- 2. Introductionpage 8
- 3. The Water for All of Michigan (WFAM) Projectpage 11
- 4. Problem Statement page 12
 - a. The Urgency of Water Insecuritypage 13
 - b. The Dilemma of Aging Infrastructurepage 16
- 5. Case Studies: Water Inequity and Water Insecurity in Michigan page 18
 - a. Metropolitan Detroit page 19
 - b. Challenges for Small Towns and Rural Communities page 33
- 6. Key Insights page 36
- 7. Recommended Funding and Financing Optionspage 44
- 8. Public Opinion Research and Stakeholder Engagementpage 62
 - a. Public Opinion Research Findings page 62
 - b. Advisory Committee Feedback page 65
- 9. Conclusion and Next Step page 66

EXECUTIVE SUMMARY

Situated at the center of the Great Lakes Basin, Michigan benefits from one of the largest freshwater endowments in the world.

And yet, many families and communities in Michigan lack reliable access to safe, clean, affordable water to meet their needs. While the most egregious examples are the Flint water crisis and widespread water shutoffs in Detroit, water insecurity is experienced in rural communities, too, such as contamination of drinking water wells by bacteria and PFAS and other toxic contaminants.

We rely on human-built water systems—community drinking water, wastewater, and stormwater management systems and, in rural areas, residential drinking water wells and septic systems—to provide water that is safe for drinking and bathing, and to prevent flooding and contamination of natural water bodies that support ecosystems and supply drinking water. Michigan, however, is accumulating a water infrastructure funding shortfall in the range of \$1 billion annually.

These two problems—water insecurity and the failure to adequately fund water infrastructure—are intrinsically connected. So, too, are their solutions.

The Water For All of Michigan (WFAM) project convened five organizations with rich and diverse experiences involving water and equity issues in Michigan—Clean Water Fund, FLOW (For Love of Water), Michigan Environmental Council (MEC), People's Water Board Coalition (PWBC), and the Sierra Club—to assess options for funding and financing water infrastructure and services through an equity and justice lens. This project report summarizes key findings, insights, and recommendations from the first phase of this work, conducted from June 2019 through September 2020.

OPPORTUNITY FOR CHANGE ARISING FROM A CONFLUENCE OF URGENT ISSUES

We are at an inflection point in history as socioeconomic upheavals are dramatically shifting political realities in the wake of the COVID-19 pandemic, growing economic inequality, a global financial crisis, and nation-wide uprisings against police brutality and demands for solutions to address structural racism. The threat of climate change is becoming increasingly apparent and urgent. Communities are questioning long-standing racial narratives as well as fiscal, health, and public water services policies. Municipal water departments and political leaders are forced to respond to these mounting public health, social justice, and infrastructure challenges. This convergence of crises and demands have dramatically changed our political, community, economic, and personal landscape, creating new possibilities for systemic change in Michigan unlike anything we have witnessed for decades. Huge numbers of Michiganders are experiencing shared fears and vulnerabilities, along with mutuality and hope, that present themselves as opportunities to enact equitable policies and legislation.



Valerie Jean

RECOMMENDATIONS TO EQUITABLY ADDRESS MICHIGAN'S WATER INFRASTRUCTURE NEEDS

In response to these urgent challenges and opportunities, the WFAM project recommends water infrastructure funding and financing solutions designed to deliver the equitable outcome of access to safe, clean, and affordable water for all:

(1) Generate a new, equitable funding source for water infrastructure through comprehensive state legislation that affirms public ownership of water and the right to access water for drinking, sanitation and health; affirms that the delivery of public drinking water, treatment of wastewater, and management of stormwater are public goods and services, the overarching purpose of which is to fulfil the public trust duty to benefit and protect for all residents the quality and reasonable use of the waters of the state by providing access to clean, safe, affordable water for all residents of Michigan; prohibits the packaging of water for sale except for bottled water authorized by a new royalty licensing system; and deposits royalties derived from licensed water bottling operations in a dedicated trust fund for public water purposes. This new funding source could raise an estimated \$250 million per year, enough to fill about one-fourth of the state's funding gap in one step.

2) Adopt new state-wide taxation and bonding proposals to generate substantial additional state revenues to address Michigan's water infrastructure funding gap, including a graduated state income tax, a millionaire surtax earmarked for water infrastructure, and/or state general obligation bonds.

(3) Secure increased federal funding for water infrastructure. State and local officials, and residents, should work with Michigan's congressional delegation to restore the eroded federal partnership with Michigan and its local communities to address water infrastructure needs.

(4) Reform Michigan's state revolving fund programs for water infrastructure to better utilize and direct these funds for the benefit of disadvantaged communities facing economic hardship.

(5) Improve transparency, public participation, and accountability in the governance of community drinking water, wastewater, and stormwater services, and related Infrastructure Investments.





PHOTO PROVIDED BY VALERIE JEAN

KEY INSIGHTS

Underlying these recommendations are several key findings developed through WFAM research, analysis, and discussions:

The story of water insecurity in Michigan reflects broader patterns of racial and socioeconomic inequity that must be recognized and remedied. A lack of access to clean, safe, and affordable water and sanitation is one of the starkest examples of environmental injustice. Michigan's water crises are most severe in Flint and Detroit—majority-Black, economically disinvested cities that have had their local elected government subordinated to state-appointed emergency managers. This report provides an in-depth case study analysis of water insecurity in Detroit, drawing on numerous studies compiled over recent years that have analyzed key factors and decisions leading to water shutoffs for roughly 140,000 homes since 2014, some multiple times. This report also highlights two examples of how rural communities are struggling to finance their water infrastructure needs, and calls for further research to better understand the factors underlying rural water insecurity across Michigan.

The current approach to financing water infrastructure, which places increasing pressure on residential ratepayers, is inequitable and unsustainable. During the 20th century, small and large cities and towns benefited from extensive federal investments in public water systems. Today, local taxpayers and ratepayers bear the burden of assessing, operating, maintaining, and financing water infrastructure with far fewer state and federal subsidies. This overreliance on ratepayers compounds existing inequities. The inability of vulnerable communities to pay for much-needed infrastructure maintenance and upgrades means their needs remain unmet, subjecting these already-vulnerable communities to greater risks of water insecurity and related health, social, and economic impacts. The current approach is also unsustainable for water utilities who are forced to increase water rates to pay for water infrastructure projects. Water rates may still be manageable for a majority of ratepayers today but, under a business as usual trajectory, water rates are expected to increase sharply, driven in large part by the need to maintain and upgrade water infrastructure which has fallen into a state of disrepair. In 2018, the American Association of Civil Engineers gave Michigan a D+ rating for the state of its water infrastructure, and Michigan's 21st Century Commission determined in 2016 that an additional \$800 million is needed annually to make the State's water infrastructure fit for the 21st century. This estimate did not take into account emerging threats to water quality such as PFAS.

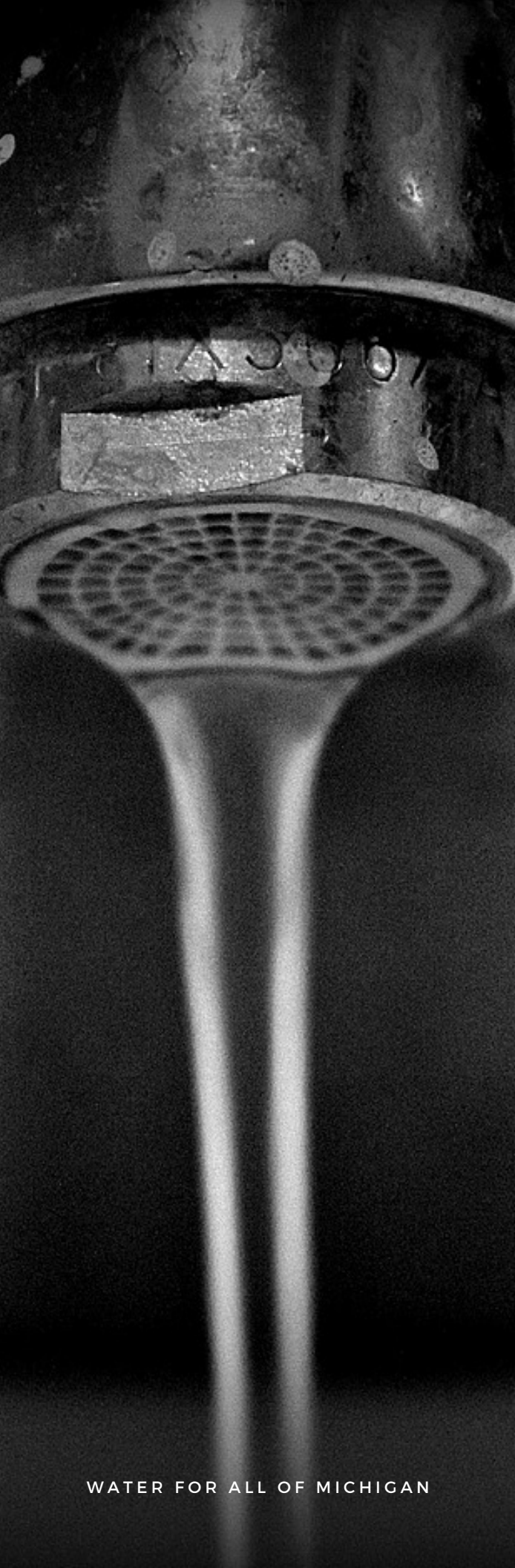
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Michigan needs to recalibrate its approach to paying for water infrastructure, to ease the burden currently placed on residential ratepayers and municipal water utilities.

Financing and funding drinking water, wastewater, and stormwater management systems must shift from primary reliance on overburdened residential ratepayers to an integrated approach that includes sources of revenues that are more equitable and reliable. As was the case in the mid-20th century, when much of the state's water infrastructure systems were built, federal and state grants are needed to support these needs. This transition is essential not only to ensure equitable outcomes for ratepayers, but also to enable public water systems to become financially, structurally, and operationally resilient, reliable, and sustainable. ■

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A NEW PARADIGM FOR WATER SERVICES, AND HOW WE SHOULD PAY FOR THEM

Solving the complex, challenging, intrinsically connected problems of inequity, water insecurity, and water infrastructure funding/financing will entail more than throwing more money at the dual problems of deteriorating water infrastructure and water affordability. We also need to critique and reform how we think about water infrastructure and the essential role it plays in supporting our individual and collective public health and wellbeing, social coherence and social stability, and our shared prosperity. This, in turn, will guide how we should pay for water infrastructure. To this end, the WFAM project has developed several key insights which are briefly stated below and further elaborated in this report.

Public water systems must be understood as a public good and service that assures safe, clean, and affordable water to all residents. To address water insecurity, water infrastructure assets must be understood as more than an assemblage of pipes, treatment plants, bioswales, cisterns, and other physical assets. Instead, these assets must be understood in terms of the water services they are meant to provide, and the communities of people they are meant to serve.

Michigan's water insecurity, inequity, and infrastructure funding problems are intrinsically linked. Michigan's broad failure to adequately fund water infrastructure as well as the water insecurity experienced by vulnerable Michigan households and communities both stem from the decoupling of water infrastructure and equity.

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Public trust principles provide a framework to reorient our understanding of human-built water systems, and how we should pay for them, by recoupling water infrastructure and equity. Our drinking water, wastewater, and stormwater management systems exist to protect and deliver safe, clean, affordable water for hydration, sustenance, bathing, and health – the same uses that are protected under deeply rooted principles of Michigan common law in connection with ownership and occupancy of property, as well as the public common nature of water under the public trust doctrine.

Each state, as sovereign under the common law, has the power to determine the nature and extent of the public trust in its waters. The comprehensive public water justice legislation recommended in this report would clarify that drinking water, wastewater, and stormwater utilities exist to fulfill the public trust in water by making water available for the needs of Michiganders in our 21st-century context—in other words, a modern-day iteration of the State's classic, public trust duty to safely steward Michigan waters for the benefit of all the people of Michigan, for their sustenance, health, and livelihoods.

Clearly grounding this comprehensive legislative framework in the public trust in water would have profound benefits for communities impacted by water shut-offs, contaminated drinking water, and other water insecurities. The royalty licensing scheme established by the framework would generate substantial funding which, as a practical matter, is sorely needed to provide solutions to long-standing, systemic, and entrenched water injustices and water inequities. The framework is not just about raising funds, however. The recommended framework is, most essentially, about equity in assuring adequate funds to ensure access to drinking water and health that are protected by the common law and public trust in water.



A NEW PARADIGM FOR WATER SERVICES, AND HOW WE SHOULD PAY FOR THEM

Currently, federal and state financing provided for water infrastructure is largely channelled through Michigan's Clean Water and Drinking Water State Revolving Funds (SRFs). Michigan statutes that govern the SRFs have not been updated in decades, and many of the provisions should be reformed to reflect current needs and fix flaws in the funding distribution. In particular, the definition of "disadvantaged communities" should be updated to ensure that more favorable loan terms and subsidies are directed to the most vulnerable communities.

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Transparent, accessible, and accountable decision-making about how funding and financing are allocated is also essential to ensure equitable outcomes. The ecosystem of water governance is complex: multiple agencies hold responsibilities over different issues, the subject matter is highly technical, and decision-making processes can have long time horizons. These factors make meaningful public participation in decisions about water rates and water infrastructure investment difficult. Therefore, this report recommends that legal requirements for transparency, public participation, and accountability in water governance be clarified, enforced and, where necessary, strengthened. In addition to delivering more equitable and community-oriented outcomes for vulnerable communities, improved transparency, public participation, and accountability can also lead to improved understanding and trust between customers and the water utilities that serve them and, in turn, improve public support for water utilities and their operations.


OPPORTUNITY TO UNITE MICHIGANDERS FOR A COMMON PURPOSE AND SHARE BENEFITS

Through statewide public polling, the WFAM project sought to test several areas of opinion and experience, including policy proposals, perceptions of Michigan's drinking water, hardship issues, and underlying values about water to determine which funding/financing options best reflect public demand. This public opinion research indicates strong agreement with values driving the WFAM project,

across all self-identified political groups. Bipartisan support was particularly strong for the proposed Public Water Justice legislative framework. This was true not only in relation to the proposal to collect royalty payments from water bottling operations in Michigan and place royalties into a dedicated fund to be used for public purposes such as improving water affordability and water infrastructure, but also for the public trust and equity values the recommended legislative framework encompasses. The survey indicated that 71% of Michiganders favor the royalty licensing proposal, including 58% who strongly favor it. Moreover, respondents were most likely to say that "clarify and ensure the public owns our water supplies for public use instead of private owners for profit" is the most important goal of the proposed Public Water Justice legislation. Finally, 78% of respondents strongly support the following statements, which express values underlying the public trust in water, including strong support within all political groups. In a state that is so divided along political lines, investing in water infrastructure and water affordability to ensure equitable access to safe, clean, and affordable water for all in Michigan presents a compelling opportunity to unite Michiganders around a common purpose for our shared benefit.



The state of Michigan should ensure that everyone has access to safe, clean, affordable drinking water, whether they are white, Black, or brown.



*We forget that
the water cycle
and the life cycle
are one.*

Jacques Cousteau

INTRODUCTION

Water is life. Securing access to clean, safe, and affordable water is the most basic necessity for life, health, dignity, and economic prosperity.

With its enviable location at the center of the Great Lakes Basin, Michigan is famous for its fresh water, which is held in trust by the state for the benefit of the public who owns it. Many families and communities in Michigan, however, face water insecurity; that is, they lack reliable access to safe, clean, affordable water to meet their needs. It's a cruel irony for the tens of thousands of people across Michigan whose water has been shut off in recent years because they cannot afford their soaring water bills. This story of water affordability and crumbling drinking water, wastewater, stormwater management systems sadly is not unique to Michigan; rather it is a national crisis of profound importance that cannot be deferred any longer.

The most egregious and high-profile examples of water insecurity in Michigan are the lead contamination crisis in Flint and widespread water shutoffs in Detroit due to unaffordable water bills. Households and communities in rural Michigan also are facing water insecurity due to drinking water contaminated with PFAS and other pollutants and the enormous per capita costs of upgrading deteriorated water infrastructure in small communities. (1)

Water security and public justice demand equal access to environmental benefits for all people -- especially low-income residents and people and communities of color, including indigenous people. A lack of access to clean, safe, and affordable water and sanitation is one of the starkest examples of environmental injustice. That Michigan's water crises are most severe in majority-Black, economically disinvested Flint, Detroit, and other emergency manager take-over cities is no coincidence. The story of water insecurity in Michigan reflects broader patterns of racial and socioeconomic inequity here and across the nation that must be recognized and remedied.

Communities in cities and towns rely on human-built water infrastructure systems -- drinking water, wastewater, and stormwater systems -- to provide water services. These systems are the building blocks of our society, designed to provide access to water that is safe for drinking and bathing, and to prevent flooding and contamination of natural water bodies that support ecosystems and supply drinking water.

That communities within such a water-abundant region could experience acute water insecurity is an indication that Michigan is failing to properly value the essential public health and environmental role water systems play, and to fund them accordingly. In fact, Michigan is accumulating a water infrastructure funding shortfall in the range of \$1 billion annually (2), and this does not account for the external costs to the public health of families and communities.

The Water for All of Michigan (WFAM) project is a collaborative undertaking by FLOW (For Love of Water), Clean Water Fund, Michigan Environmental Council (MEC), People's Water Board Coalition (PWBC), and the Sierra Club. The project scrutinizes options for closing

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Michigan's water infrastructure funding gap through an equity and justice lens to assess the obstacles and/or opportunities that each alternative presents to address water insecurity in vulnerable communities. Securing equitable and just outcomes is central to WFAM's endeavor.

Equity refers to justice and fair inclusion—a condition in which everyone has a right and opportunity to participate and prosper. Water equity occurs when everyone has (1) access to safe, clean, and affordable drinking water and wastewater services without risk of shutoffs; (2) access without interruption to resilient drinking water, wastewater, and stormwater systems in the face of emergencies such as health threats, economic collapse, and floods, drought, and other climate change risks; (3) a role in decision-making processes related to water and sanitation rates, infrastructure, and management in their communities; and (4) an opportunity to prosper from the economic, social, and environmental benefits of public water systems. The problems of water infrastructure, inequity, and water insecurity in Michigan are intrinsically connected, and so, too, are their solutions.

To meet these complex objectives, Michigan's water infrastructure funding challenge must be understood as more than the need to pay for maintaining, updating, or replacing our water infrastructure as assets, but foremost as the need to provide water -- an essential public service - - to residents and commercial enterprises who depend on it for their lives and livelihood.

To address water insecurity, our infrastructure assets must be understood in terms of the water services they are meant to provide, and the communities of people they are meant to serve. Understanding our water systems in terms of public trust principles can reorient our understanding of the essential role water services play for people, environments, and for society, and ensure Michigan's sovereign duty to protect and provide access to safe, clean, and affordable water.

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This WFAM project report recommends water infrastructure funding and financing solutions designed to deliver the equitable outcome of access to safe, clean, and affordable water for all.

Underlying these recommendations, this report reaches three overarching conclusions:

1. Public water systems must be viewed foremost as a public good and service that assures safe, clean, and affordable water to all its residents;
2. Public water systems must become financially, structurally, and operationally resilient, reliable, and sustainable; and
3. Financing and funding public water must shift from primary reliance on overburdened residential ratepayers to an integrated approach that includes sources of revenue that are more equitable and reliable to address the paramount concern for water and health as the foundation for stable communities and a prosperous economy. (3)

Given the seriousness of recent crises surrounding public water and health, this report recommends that the state of Michigan, its local public water utilities, and its residents collectively act with urgency to:

1. **Generate a new funding source for water infrastructure through comprehensive state legislation that affirms public ownership of water and the right to access water for drinking, sanitation and health;** prohibits the packaging of water for sale except for bottled water authorized by a new royalty licensing system; and deposits royalties derived from licensed water bottling operations in a dedicated trust fund for public water supply purposes. This new funding source could raise an estimated \$250 million a year in Michigan, according to an independent study conducted by a Michigan State University research team -- filling about one-fourth of the annual water infrastructure funding gap in one step.
2. **Adopt new taxation and bonding proposals to generate substantial additional state revenues** to address Michigan's water infrastructure funding gap, including a graduated state income tax, a millionaire surtax earmarked for water infrastructure, and/or state general obligation bonds.
3. **Secure increased federal funding for water infrastructure.** State and local officials, and residents, should work with Michigan's congressional delegation to restore the eroded federal partnership with Michigan and its local communities to address water infrastructure needs.
4. **Reform Michigan's state revolving fund programs** for water infrastructure to better utilize and direct these funds for the benefit of communities facing economic hardship.
5. **Improve transparency, public participation, and accountability** in the governance of community drinking water, wastewater, and stormwater services, and related infrastructure investments.

Further explanation of these recommendations, and the analysis behind them, is provided in this report, and in underlying reports and analyses that are linked as appendices. A glossary of key terms is also appended. Section I of this report briefly explains the origins, process, and outputs of the WFAM project. Section II defines the problems of water insecurity, water inequity, and funding/financing water infrastructure. Section III provides case studies illustrating the problems analyzed in this report. Section IV articulates the key findings and insights generated by the WFAM project. Section V offers recommendations for water infrastructure funding solutions designed to deliver equitable outcomes. Section VI shares findings from the public opinion research and stakeholder outreach conducted to assess preliminary interest in, support for, and cautions regarding these recommendations. Section VII outlines next steps needed to build momentum, expand knowledge and awareness, and engage diverse communities to advance this agenda. ■

References:

- 1) Michigan's 1,390 community water systems supply approximately 75% of residents and businesses; most systems were built 50-100 years ago and need repair and replacement. An estimated 10-50% of these drinking water systems have leaks. See 21st Century Infrastructure Commission Report (November 30, 2016). Retrieved from: https://www.michigan.gov/documents/snyder/21st_Century_Infrastructure_Commission_Final_Report_1_544276_7.pdf
- 2) 21st Century Infrastructure Commission Report (2016). Retrieved from: https://www.michigan.gov/documents/snyder/21st_Century_Infrastructure_Commission_Final_Report_1_544276_7.pdf
E.g., Michigan Const., art. 4, sec. 51 (declaration and duty of the State to promote and protect the paramount public concern for health); Michigan Const., art. 4, sec. 52 (declaration and duty of the State to protect the paramount public concern in its air, water, and natural resources from pollution or impairment); See also American Society of Civil Engineers & The Value of Water Campaign (2002). The Economic Benefits of Investing in Water Infrastructure: How a Failure to Act Would Affect the US Economic Recovery. Retrieved from: https://www.asce.org/uploadedFiles/Issues_and_Advocacy/Infrastructure/Content_Pieces/the-economic-benefits-of-investing-in-water-infrastructure-report.pdf; BlueGreen Alliance (2020). Waterworks: The Job Creation Potential of Repairing America's Water Infrastructure. Retrieved from: <http://www.bluegreenalliance.org/wp-content/uploads/2020/07/BGA-Water-Works-Report-vFINAL.pdf>

I) THE WATER FOR ALL OF MICHIGAN (WFAM) PROJECT

While there is broad, bipartisan support for infrastructure investment, there is no authoritative analysis of funding and financing options that can realistically be expected to meet Michigan's water infrastructure funding gap. In addition, there is insufficient data on public attitudes and sentiments regarding water funding options, especially data that includes adequate representation from communities most impacted by water affordability challenges and other water insecurities and inequities. Given the importance of assessing options to assure policies that can meet Michigan's critical water infrastructure and equity needs, the WFAM project was convened by two of Michigan's leading foundations—the C.S. Mott Foundation and Erb Family Foundation—to analyze these complex water infrastructure issues through an equity and justice lens.

Since June 2019, project partners -- Clean Water Fund, FLOW (For Love of Water) Michigan Environmental Council (MEC), People's Water Board Coalition (PWBC), and the Sierra Club) -- have met regularly to share learning and develop key findings, insights, and recommendations. The project also produced a set of analytical work products to develop knowledge and understanding. These underlying work products are attached to this report as appendices. (4) They include financial and technical analyses of options for funding and financing that were completed by the University of North Carolina School of Government Environmental Finance Center and the Michigan State University Extension Center for Economic Analysis; legal analyses of funding and financing options; polling research to assess public opinion on the issues and options considered by the project; and a landscape analysis tracing the evolution of Michigan's current water inequities, the state's water infrastructure funding gap, and other current water infrastructure challenges, as well as analysis of the pathways through which the solutions proposed could be achieved.

The project also formed an Advisory Committee composed of representatives of frontline and stakeholder groups working on issues of water equity and justice, and water infrastructure, who have been consulted to assess, scrutinize, and provide input on issue framing and key findings and recommendations presented in this report. In addition, WFAM reached out to, and received inputs from, other experts working on relevant issues in Michigan and nationally, which helped to inform and groundtruth the project outcomes.

References:

4) For a list of and hyperlinks to these analyses, [see Appendices](#).



II) PROBLEM STATEMENT

Michigan's water insecurity, inequity, and infrastructure funding problems are intrinsically linked. Small and large cities and towns benefited from extensive federal investments in public water systems during the twentieth century. Today, instead, local taxpayers and ratepayers bear the major burden of assessing, operating, maintaining, and financing water systems' assets with far fewer state and federal subsidies.

Michigan's economy in this century is also fundamentally different and is no longer largely driven by the automobile industry. Among the successes of this industry were thousands of good paying jobs that created a burgeoning middle class, which spurred the development of new cities and towns outside of urban core communities. That growth occurred because of the expansion of water and wastewater infrastructure, as well as the interstate highway system to link new suburban housing to urban job centers.

However, in cities such as Detroit, Highland Park, Pontiac, Flint, and Benton Harbor, racial strife, white exodus, socioeconomic disinvestment, and structural discrimination laid the groundwork for years of major infrastructure maintenance deferrals in sprawling systems. Additionally, because water and sewerage system costs are fixed, remaining residents increasingly have been charged legacy costs to maintain municipal systems built for up to three times current usage. It is an unsustainable and unjust practice that has had tremendous consequences, particularly in low-income majority-Black communities. As illustrated by the cases of the Village of Beulah and Oshtemo Township described in Section III of this report, small communities in rural areas also face enormous costs when confronted with the need to build or substantially upgrade water infrastructure to protect water quality and safety. Without the kinds of state and federal subsidies that supported major water infrastructure projects during the mid-20th century, these communities are left to distribute these costs among a small population of residents.

The convergence of these problems exists in three issue areas: (1) water insecurity, (2) aged water infrastructure, and (3) water inequity. They are the basis for the to-date largely unsuccessful efforts by local and state officials and policy advocates to improve Michigan's ability to ensure affordable and sustainable solutions to the state's mounting water and wastewater infrastructure needs. The lived reality of water insecurity and the problem of deteriorated infrastructure are elaborated in this section. Section III highlights how structural racism and inequity have shaped how water systems in Detroit and surrounding communities are paid for, and Section IV explains how the current practice throughout the state of relying on residential ratepayers to bear an ever-larger financial burden for water infrastructure is fundamentally inequitable and unsustainable.

A) THE URGENCY OF WATER INSECURITY

The impacts of water insecurity are devastating and manifold. When a person's water is unhealthy to drink due to lead or other toxic contamination, or shut off due to inability to pay unaffordable water bills, that individual's physical health is put at risk. At the most basic level, people may suffer dehydration and an inability to prepare many types of food. Sewage can build up after water is disconnected, creating unsanitary conditions. Children can develop conditions such as psoriasis and eczema due to lack of clean water, and people of all ages require water to take medicine. For some people, a lack of affordable water means that they are forced to choose between paying for medical costs, medicine, food, or water. (5)

Lack of access to clean, safe, and affordable water can also have social and emotional impacts. Coping behaviors range from modified consumption to using gray water, or water that was previously used for cooking of other household tasks. Using gray water and cutting back on water use for hygiene can lead to social stigma, as poor hygiene and uncleanness are markers of social failure. This can impact employment, success in school, and emotional health. When people experience water insecurity, they tend to report higher levels of shame, stress, and depression. (6)

A person's housing is also threatened by an inability to pay water bills. In some jurisdictions, water utilities attach liens to a homeowner's property taxes if the water bill is not paid. If the homeowner cannot pay the resulting property tax, they can lose their home altogether. Also, public health inspectors can condemn a house that does not have water, a tacit acknowledgment that water is required for adequate housing. (7) In Michigan, houses are considered "unfit for human habitation" if they lack "running water furnished in sufficient quantities at all times." (8) Water shutoffs affect housing stability not only for directly impacted residents, but also for others in the neighborhood as well. In cities experiencing

population decline, foreclosed homes often remain vacant and blighted, repelling neighbors and degrading the overall quality of the community. Detroit City Council Member James Tate observed that just a couple of shutoffs on a single block could result in blight that spurs the decline of a whole neighborhood. (9)

Family unity may also be threatened when access to clean, safe water in the home is unaffordable. Under Michigan guidelines, the lack of running water can be a factor when considering whether parents are providing a suitable living environment for their children, (10) and the UN Special Rapporteur investigating water shutoffs in Detroit received reports of children being taken from homes under child protective laws following water shutoffs. (11)

Water insecurity is also detrimental to public health. A hundred years ago, water-borne illnesses such as cholera were a leading cause of death in the United States. In response, governments invested in water systems to extend safe drinking water and wastewater services to nearly every American, and public health and economic development dramatically improved. (12) The current coronavirus pandemic brings the public health imperative of safe, clean, and affordable water back to the fore, in light of the importance of handwashing and other sanitation measures to mitigate the spread of the virus, and motivated Governor Whitmer to issue an Emergency Executive Order to restore water services for households that had been shut off. (13)

In the face of widening economic inequality, more and more families and communities are struggling, feeling increasingly uncertain that their basic needs—including the need for clean, safe, and affordable water—will be met. From 1945 to 1973, income growth in Michigan was broadly shared across society. In contrast, between 1973 and 2007, income growth was highly unequal, with over

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half (58.7%) of all income growth concentrated in the top 1% of families, a pattern which persisted during the recovery from the Great Recession since 2009. (14) Consequently, more and more families in Michigan are struggling to make ends meet. A recent study found that in 2017 over 1.6 million households--43% of households in Michigan--could not afford basic needs such as housing, child care, food transportation, healthcare, and basic technology. (15) These realities have only worsened in the face of the economic downturn brought on by the current coronavirus pandemic. (16)

At the same time, the burden of water bills is rising. Since 2014, individuals and families in over 140,000 Michigan households have had their water shut off due to inability to pay unaffordable water bills. (17) Water affordability is typically measured as the percentage of a household's income that goes toward paying water bills, for drinking water and sanitation, although there is not one generally accepted definition or measurement of water affordability. (18) The EPA standard sets the threshold for water affordability at 2.5% of median household income (MHI) to pay drinking water costs and 2.0% to pay sewer costs, for a total of 4.5%. (19) It is important to note, however, that the EPA method is somewhat arbitrary; it was not designed to assess what an individual household could actually afford. The WFAM project asserts that a limit of 1-2% of the household budget for households living below 200% of the federal poverty level is a more appropriate standard, with lower-income households paying a lower percentage. (20)

Over the next few decades, water prices are expected to increase to four times current

levels. (21) This steep jump in water prices outpaced the increase of median household income, which went up just 35% over this period. (22) And, if water rates rise at projected levels, conservative projections estimate that, applying the EPA's 4.5% affordability threshold, the percentage of households who will find water bills unaffordable could triple from 11.9% in 2017 to 35.6% by 2023. (23) Michigan ranks 12th in the nation for the number of census tracts at high risk for unaffordable water bills by 2023. (24)

Prompted by the COVID-19 pandemic, Governor Whitmer has ordered the restoration of water services, amounting to a de facto moratorium on water shutoffs. Whitmer's Executive Orders to protect public health against COVID-19 by ensuring all residents have access to running water service are currently scheduled to lapse on December 31, 2020. If that happens, thousands of Michigan's most vulnerable residents could once again be without access to safe drinking water and sanitation services in their homes. Moreover, water bills that have accumulated since the Executive Orders were put in place would come due, further overwhelming households already reeling from the economic impacts of the pandemic, forcing families to choose between water and sanitation and other essential needs as they struggle to survive both the health and economic threats posed by the pandemic. While Governor Whitmer's Executive Orders requiring the restoration of water services to all Michigan have been a welcome and necessary emergency intervention (25), a ban on shutoffs and permanent solutions for water affordability are still required.

Valerie Jean 2019

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B) THE DILEMMA OF AGING INFRASTRUCTURE

Michigan is steadily accruing a water infrastructure funding shortfall in the range of \$1 billion annually. The American Association of Civil Engineers gave Michigan a D+ rating for the state of its water infrastructure. (26) The 21st Century Infrastructure Commission, in its 2016 report to Governor Snyder, estimated that Michigan needed to make additional investments of at least \$800 million annually to meet the State's water infrastructure needs. (27) Specifically, with regard to the needs of drinking water systems, an estimated \$731 million to \$1.01 billion is needed on an annual basis, but current investments average only \$447 million annually. For wastewater (sewer) and stormwater (drainage) systems, the EPA suggests that Michigan's estimated investment need is \$2.14 billion, but other analysts say this is an underestimate. During 2004-2013, Michigan's annual average investment in wastewater and stormwater systems was \$691 million. (28)

In addition, groundwater and surface water pollution, including hard-to-mitigate industrial chemicals like PFAS and excess nutrient runoff from agricultural lands, pose grave threats to drinking water supplies and water ecosystems. The Snyder Commission did not factor in the costs of remediating PFAS contamination. And the effects of climate change, such as floods from climate change and dam failures like the Edenville dam in June 2020, and from urban heat islands, have overwhelmed and damaged public water infrastructure. The need to remediate contaminants and to build systems more resilient to the impacts of climate change further add to water infrastructure costs.

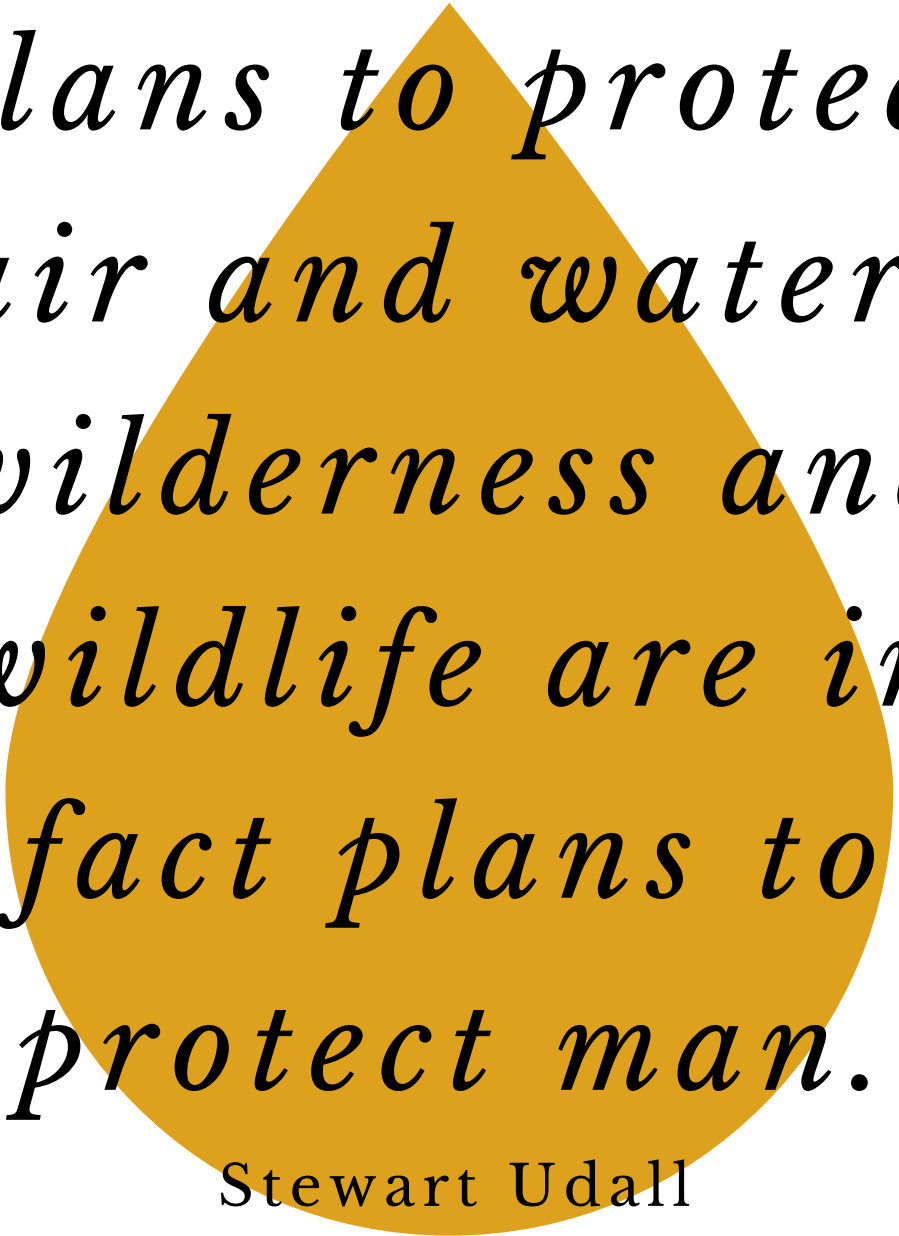
Funding (as distinct from financing) for water infrastructure generally comes from either taxpayers (federal, state, local) or ratepayers (the users of water systems, who pay user fees and other charges). In the past, federal taxpayers provided a significant source of funding, but this has declined substantially in recent decades, (29) and most of the federal funding for water

infrastructure is issued to local water systems as loans from either the US Department of Agriculture (USDA) or state Drinking Water or Clean Water Revolving Funds, which need to be repaid by ratepayers. (30) Other financing for water infrastructure includes municipal revenue bonds, to be repaid by revenues generated from water ratepayers. (31)

In sum, Michigan's water infrastructure shortfall results from the aging of our water systems and statewide population declines, coupled with dramatic declines in federal funding since the late 1970s, and the state's failure to fill this funding gap. (32) During the 1950s to 1970s, federal grants enabled communities around the country to build water supply and wastewater systems. In 1977, federal funding provided 63% of funding for water infrastructure systems in the United States, and much of this was given as grants to local utilities; by 2014, however, this had fallen to 9%, with most assistance provided as low-interest loans to be repaid by local ratepayers. Hence, over recent decades the burden of maintaining and replacing outdated water infrastructure has dramatically shifted, with the burden falling almost entirely on ratepayers, regardless of income or ability to pay.

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*Plans to protect
air and water,
wilderness and
wildlife are in
fact plans to
protect man.*

Stewart Udall

III) CASE STUDIES: WATER INEQUITY AND WATER INSECURITY IN MICHIGAN

Despite the abundance of fresh surface water and groundwater in Michigan, access for all to clean, safe, and affordable drinking water and wastewater services has been restricted for decades. Michigan currently faces a crisis compounded by punitive fiscal and governance policies, contaminated drinking water sources, ineffective assistance programs, extreme weather events due to climate change, and failing infrastructure. Low-income residents, people of color across the state (particularly majority-Black cities), and small rural communities are the most directly impacted.

The changes required to guarantee safe and affordable access to water require a deep review of the factors and forces that propel and reinforce systems of inequality and disparate impacts. Over the past decade, the factors underlying the severe water inequity and water insecurity suffered by the residents of Flint and Detroit have been studied, analyzed, and

chronicled. This section presents a case study of Detroit given that nearly 40% of Michiganders rely on this water system only. It examines how historical inequities in policies and structures regarding water access have created and compounded water infrastructure challenges and references many of these studies.

Growing problems of water contamination and the enormous costs of maintaining and upgrading water infrastructure in small towns and rural regions of Michigan have not been as systematically analyzed or documented to date. Further research is needed into how these rural issues are evolving, and the underlying political arrangements and other historical factors that would further understanding and present a coherent narrative of these problems. As a start, this report highlights two recent examples of water infrastructure funding and financing challenges in two small, rural communities: the Village of Beulah in Benzie County and the Township of Oshtemo in Kalamazoo County.

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A) METROPOLITAN DETROIT

Over recent years, scholars and other analysts have studied and written about how, in Southeast Michigan, the human right to water and sanitation has been a proxy fight for access to political power and self-determination in terms of ownership and priorities. Although the Southeast Michigan region served by the Great Lakes Water Authority (GLWA) covers a relatively small portion of the state geographically, it includes nearly 40% of Michigan's population. It also includes the state's most egregious examples of water inequity and injustice: the Flint lead contamination crisis and the Detroit water shutoffs. While the historical and political dynamics described here may not mirror the experience of every region of the state, there are similar trends across the state, and it is important to elevate this story to demonstrate the depth of the problems and the opportunities and urgency for change.

BLAME AND BURDEN: THE COST OF DISINVESTMENT

The story of access to water in Detroit is a story inextricably linked with the late 20th century push for disinvestment in urban centers in support of suburban sprawl and the tendency to construe collectively created problems as the fault of individuals who are, in fact, victims rather than perpetrators of structural problems. (33) The fiscal pressures created by deindustrialization, white flight, regressive tax policy, federal disinvestment, risky debt financing, mass incarceration, and drastic cuts to revenue sharing (34) at the state level shifted the financial burden of maintaining the Detroit Water and Sewerage Department (DWSD) to the individual pocketbooks of city residents. (35) Despite the convergence of institutional and economic forces that created the water crisis in Detroit, low-income residents who are effectively shut out of institutional decision-making are consistently blamed for creating the crisis that they are experiencing first hand. Those who suffer from water shutoffs are the ones with the least access to, and control over, the myriad of institutional interests that created the water access problem. This scapegoating is a hallmark of how power obscures the structures through which it perpetuates itself, and it is the rhetorical linchpin that hampers broad public understanding of this decades-long crisis.

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DISCRIMINATION IN HIRING AND HOUSING: DISCRIMINATION IN WATER ACCESS

Historical decisions created the current structural problems for DWSD and GLWA that disproportionately impact low-income Black residents. These factors include the racial inequality of labor unions and racially disparate federal financial support for home mortgages and opportunities to move outside of areas of the region and city with richer opportunity networks. (37) In short, racial discrimination in hiring practices and housing policies locked Black residents into specific neighborhoods and cities. These geographic areas often received significantly less investment--a pattern which persists today.

Today, the regional water system serves 3.8 million people--over one-third of Michigan's total population. The vast majority, some 80%, of people served by the system live outside of the city of Detroit, but DWSD imposes higher water rates and shutoffs on Detroit residents. (38) Increased patterns of residential segregation enabled municipalities to more easily deprive majority-Black neighborhoods of access to essential services including water and sewer. (39) Recent trends show that the affordability crisis is spreading beyond Detroit. Throughout metropolitan Detroit, low-income residents in Wayne, Oakland, and Macomb counties are sometimes paying as much as an astounding 10% of their income in water and sewer bills. (40)

Although racism may not be the explicitly stated driver of state and municipal policies today, racist inequity is baked into the way the system functions. Without directly recognizing and remedying these lingering legacies, we will continue to see racially and economically disparate outcomes when it comes to access to clean, safe, and affordable water. As the report from the Michigan Civil Rights Commission on the Flint Water Crisis found, "Decisions were made not just about the water supply itself, but also about who the decision-makers would be, what their goals would be, and to whom they would be held accountable...We believe that the Flint water crisis is a symptom of a deeper disease. Simply fixing the water system, like removing a tumor, is a critical step, but it won't help the people of Flint [or other vulnerable Michiganders] if the cancer remains." (41)

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INTERROGATING DEBT AS A JUSTIFICATION FOR DISINVESTMENT

In the case of cities under emergency management in Michigan, including but not limited to Detroit, high levels of municipal debt resulting from orchestrated structural inequality (42) was used to justify drastic restructuring of utility ownership and draconian water shutoff policies. (43) Too often this discussion centers on which entities owe debt, but this report asks the following questions: Who profits from municipal debt? Which communities and individuals are on the hook for repaying the debt? If Detroit heavily subsidized the expansion of the suburbs with its infrastructure, why are its most vulnerable residents burdened with the debt assigned to the maintenance of regional infrastructure used by millions of people?

Deconstructing cultural narratives about municipal debt is key to understanding the underlying causes of the Detroit water crisis, as the narrative around Detroit's bankruptcy wrongly blames the city's pensioners and low-income residents by delineating them as delinquent taxpayers (44) and marginalizing them as mere customers without rights of access to affordable water. (45) The way in which debt is discursively used to justify wealth redistribution towards corporate banks is a deeper structural problem that exploits and perpetuates debt. Economists Simon Johnson and James Kwak point out that America does face a long-term debt problem, and that this problem "breeds a climate of demagoguery and delusion, which over the long haul leads to cuts that affect the people who can afford it least. The end result is that the United States will be increasingly segregated with the super rich living in private islands, a small comfortable professional class, and a large struggling lower class." (46) We are watching the accuracy of this prediction unfold in real-time as rich real estate investors reap record profits, with the support from the federal COVID-19 economic rescue package (47), while WFAM project partners fought desperately for a statewide moratorium on water shutoffs so low-income Michiganders could wash their hands during a global pandemic. (48)

The historical antecedents of the Detroit water crisis stem from two crucial decisions in 1999 that shaped the city's financial stability and ultimately contributed to its bankruptcy in 2014; President Bill Clinton signed the repeal of the Glass-Steagall Act, and Federal Judge Feikens issued his decision in the 1999 Rate Settlement agreement between DWSD and surrounding suburbs. The repeal of Glass-Steagall removed the Depression-era regulation of financial markets and allowed banks to sell the mortgages they originated. (49) This repeal led directly to the subprime mortgage crisis, in which lenders intentionally targeted underbanked Black neighborhoods with predatory lending practices. (50) Judge Feikens' decision obligated DWSD to pay for 83% of the costs associated with maintaining pipes and combined sewer overflow (CSO) facilities, leaving the suburbs responsible for only 17%. (51) This is despite the fact that the suburbs contribute significantly to the wet-weather flows that lead to CSO problems. The Feikens' decision was carried over in the 2014 bankruptcy agreement that created GLWA and is still in effect today. CSO-control facilities are expensive to build and manage. Since 1996, the City of Detroit has spent over \$1.2 billion to combat CSO discharges. (52) The ongoing outcome of these two decisions mean that Detroiters -- a majority of whom are low-income and Black -- pay significantly more for both housing and water than their suburban counterparts. The disparity in debt for what Black Detroiters owe for both their homes and water service is a deeply racist outcome of decisions that were made through the federal courts and Wall Street.

By the early 2000s, the financial cost of complying with U.S. Environmental Protection Agency (EPA) regulations for water system improvements had shifted from the federal government to states and local governments. (53) Water and sewer rates rose rapidly as interest payments on the bonds Detroit floated to address these needs were added to water bills. (54) During the 1990s and continuing through the first decade of the 2000s, federal

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grants were converted to loans through the State Revolving Loan Program, and federal funding overall declined and plateaued at far lower levels than in the 1970s and 1980s. (55) In the words of James Fausone, the Chairman of the Board of Water Commissions for the DWSD, “There is an absolute lack of national and state planning on water infrastructure, except on the back of individual users.” (56) As the municipal tax base shrank, city officials and DWSD required residents to pay rising water bills or face water shutoffs. In 2005 alone, DWSD cut off water service to more than 42,000 homes as a result of unpaid water bills. (57) ■

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HIGHLAND PARK: THE CANARY IN THE COAL MINE

The identification of city-wide water affordability problems first began at the turn of this century in Highland Park, Michigan, among residents concerned with very high bills, inconsistent billing by the municipality, and many stories of disconnected service among neighbors. This nearly three-square-mile city within the boundaries of the city of Detroit is known for the first moving assembly line at the Model T factory by Henry Ford. Highland Park was once a thriving city with its own water plant.. It is also among the first municipalities to be taken under emergency management by the state of Michigan in 2000. Its local residents include the President of the National Welfare Rights Union,

Marian Kramer, a civil-rights era activist with deep roots in community organizing and class-race analysis. Ms. Kramer engaged Maureen Taylor, State Chair of the Michigan Welfare Rights Organization (MWRO), in meetings with residents and local officials to try to understand how it could be that so many residents were living without water, or on the verge of being disconnected, because they could not afford their bills. This story has been well-documented in the film *The Water Front* (2007) (58) and precedes the emergence of similar and wider shutoff and affordability problems in Detroit.

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THE SHUTOFFS START IN DETROIT

In late 2002, MWRO learned that DWSD shut off water service to 40,742 Detroit residences between June 2001-June 2002. In response, MWRO convened a series of protests in early 2003 called Resurrection Mondays, declaring, "Thousands of families are without water because they can't afford to pay for it, while corporations are allowed to get behind for years without threats or disconnections." Congressman John Conyers, Jr. echoed their concerns and issued a bold statement to Public Citizen, Water for All Campaign on 2/4/03: "Immediate action must be taken to ensure the health and well-being of Detroit residents who are being deprived of these basic services," Conyers said. "No citizen should have to endure what people are facing day after day during the coldest winter months. It is critical to impose a moratorium on the cut-off⁵⁹. Human rights must come first." (59)

In response to growing concerns and fears among residents, MWRO convened meetings to discuss the crisis with Detroit City Council members, and attorneys with Michigan Legal Services and the Poverty Law Center at the University of Michigan.

In 2004, they learned of economist and utility affordability expert Roger Colton and invited him to Detroit to discuss what was happening with low-income DWSD customers. Later that year, Detroit City Council hired Colton to meet with city officials and DWSD staff to assess the makings of a water affordability program based on income for poor households. Colton's analysis determined that such a plan would bring in more revenue for the DWSD by providing fixed credits, while significantly reducing or ending shutoffs. (60) This is due to a higher rate of participation from ratepayers when bills are affordable, as well as savings from reduced collections and an effective arrearage management component to avoid service termination.

In January 2005, Colton presented to Detroit City Council a Water Affordability Program (WAP) on behalf of the Michigan Poverty Law Program, Michigan Legal Services and their clients (MWRO). The proposal contained three components: (a) An explicit water/sewer affordability program,

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consisting of rate affordability, arrearage management, and water conservation; (b) A proposal for basic consumer protections to be afforded low-income customers; and (c) A proposal for innovative collections activities to be directed toward customers with an ability to pay. Additionally, it was discovered by Councilmember Joann Watson that DWSD's budget had at least \$15 million available in non-rate revenue, such as late payment fees, that could be used to establish and fund the WAP. Detroit City Council voted to approve the program and the DWSD Director Victor Mercado agreed to set aside \$5 million for a WAP fund. The 2005 estimates were that the plan would cost \$13.5 million annually for start-up, administrative and bad debt offsets. (61)

The Mayor's liaison to City Council continued to negotiate changes to the WAP with MWRO's attorneys as the Kilpatrick Administration believed the new Water Affordability Program would be legally contested. (62) Years later WAP advocates learned the hard truths of corruptive actions (63) that contributed to the city's failure to implement the water affordability plan, including the reallocation of these funds siphoned off to meet the city's other financial needs. In 2007, the city implemented a modified version of the 2005 WAP called the Detroit Residential Water Assistance Plan (DRWAP) to be administered by DWSD and the Detroit Human Service Department (DHS). It was provided with a \$2.5 million start-up fund from non-rate revenue, plus supported by voluntary donations (an idea original to the 2005 plan), and DWSD's non-profit WAVE fund (64) and provided up to \$175 in discounts versus payments based on a percentage of income. Despite administrative and funding challenges through 2016, the DRWAP did not ultimately address the problem of high water bills and water shutoffs, for low-income residents. For instance, only 300 of the 24,743 eligible customers enrolled in the program did not default on their payments. (65) It would take the passage of an enforceable city ordinance or state statute to implement the Colton affordability plan. (66)

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THE 2008 FINANCIAL CRISIS: HOW A HOUSING CRISIS BECAME A WATER CRISIS

As DWSD continued with its water shutoff policies, the 2008 financial crisis was brewing. With the repeal of the Glass-Steagall Act in the late 1990s, banks created new commodities through bundling mortgage debt as mortgage-backed securities and selling the debt itself as a commodity through financial markets. As a result, lenders were no longer primarily concerned with a borrower's ability to pay back their mortgage. Instead, they were more interested in securing the mortgage in the first place and then recouping a fee when the mortgage was sold to another entity. (67) Some of the largest names in real estate finance, including Wells Fargo, (68) Morgan Stanley (69), and Quicken Loans (70), intentionally targeted low-income communities of color with predatory lending practices, locking thousands of Detroiters into disastrous subprime mortgages. (71) The American Civil Liberties Union (ACLU) of Michigan filed a lawsuit on behalf of Detroit homeowners to hold Wall Street accountable for the devastation of Black communities that followed in the wake of the 2008 financial crisis. (72) According to the Haas Institute's 2013 study, Detroit had the highest number of subprime mortgage loans per capita of any American city. (73)

Compounding the mortgage crisis, the City of Detroit and Wayne County Treasurer failed to properly assess the value of homes as the real estate market plummeted, the outcome being that Black Detroiters were taxed as if their homes were worth significantly more than their actual market value. (74) Despite the ACLU's successful lawsuit to stop the practice of over assessing Detroit properties, many Detroiters who qualify for the Poverty Tax Exemption did not receive it, and many continue to have their properties overassessed by the County Treasurer's office. (75)

The subprime mortgage crisis was directly linked to water access when the DWSD made the decision to roll unpaid water bills onto inflated property taxes. (76) In 2016, the We The People of Detroit Research Collective cross-referenced data on water bill debt with auctioned homes and demonstrated a significant, racialized link between water bill debt and home foreclosures. Citywide, 11,979 homes that went to auction had water debt included in their delinquent taxes. WFAM partners, led by the People's Water Board Coalition, continue to gather data on home foreclosures linked to liens placed on homes in Oakland County because of unpaid water bills, as this problem is not confined to the city of Detroit alone.

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The public narrative for these foreclosure practices has centered on the need to revitalize the city by removing delinquent low-income property owners. However, since 2005, 90% of the foreclosed homes have been sold to risky speculative investors from outside the city. According to researchers at the University of Michigan tracking the buyers of foreclosed Detroit properties, speculators often put no investment into the foreclosed home, renting it “as is” to desperate tenants or selling it through land contracts that give little buyer protection. Many of the largest auction buyers linked to subsequent eviction filings are speculators and slum landlords who regularly fail to register, bring up to code, or pay taxes on their properties. (78) While Detroiters were losing their homes because of a Wall Street-engineered financial crisis and unlawful tax assessments coupled with unaffordable water bills, the state of Michigan proposed further tax breaks for corporations—even when those corporations had outstanding tax debt. (79, 80) The justification of corporate tax breaks centers on the corporate investment that is supposed to follow; however, research shows that a majority of economic development projects would happen without municipal tax breaks provided as an incentive. (81) Furthermore, Detroit City Council documents obtained under the Freedom of Information Act by the Detroit News show that business- and government-owned properties owed almost twice as much in delinquent water bills to DWSD as compared to residents, but rarely faced shutoffs. (82) The outcomes of the 2008 financial crisis are intensely racialized and class-based, as thousands of low-income majority-Black Detroiters were charged unfairly for both housing and water and, as a result, often lost both their homes and access to water.

It is important to weave together the fallout from the 2008 subprime mortgage crisis with Detroit’s current water shutoff policies. The subprime mortgage crisis laid the groundwork for the city of Detroit bankruptcy, and it was in the wake of the 2014 Detroit bankruptcy and creation of GLWA that Detroiters were hit with the most

devastating waves of water shutoffs. The justification for Detroit’s bankruptcy was repeatedly named as the city’s mismanagement and the financial burden of its pension system. (83) This narrative, however, leaves unexamined the fiscal damages of disinvestment, unequal revenue sharing, and poverty brought on by the 2008 financial crisis, (84) and it is silent on the historical legacies of redlining and white flight. Instead, Detroit was chastised for lacking the political will to dismantle and offload its financial commitments to its own pensioners and residents. Black Detroiters were painted as being undeserving of vital public services as they themselves were named as the primary contributors to the city’s downfall. ■



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INTERROGATING BANKRUPTCY: WHO WAS TO BLAME AND WHO PAID THE PRICE?

Under Chapter 9 of the United States bankruptcy code, a municipality is eligible for bankruptcy if it cannot pay its debts when they come due. The former Governor Synder-appointed Emergency Manager, Kevyn Orr, addressed the problem by cutting retiree benefits and reducing the city's long-term financial liabilities. However, Detroit's bankruptcy was caused primarily by a severe decline in revenue and complicated Wall Street deals that put its ability to pay its expenses in dire jeopardy. Detroit relied on debt-based financing and was forced into excessive borrowing under increasingly risky terms, taking out more loans to cover previous debt obligations, until the city no longer had enough revenue being generated due to the erosion of its tax base and drastic cuts in state revenue sharing. Even while in bankruptcy, Detroit was making payments of \$36 million a year to UBS and Bank of America (formerly Merrill Lynch), just to cover risky debt-servicing swap agreements, leading Kevyn Orr to argue in court that these predatory financing deals were done at the behest of investment banks that would profit handsomely from the transactions. None of the decisions leading to this fiscal disaster were made by Detroit's pensioners, but they paid the price. They weren't the only ones--in the final bankruptcy deal, Detroit lost control of its most valuable asset: the water and sewer utility that provides water to nearly 40% of the residents of Michigan.

In 2014, several co-counsel attorneys and led by civil rights attorney Alice Jennings, brought a class action lawsuit on behalf of low-income residents and grassroots organizations in the case of **Lyda et.al v. City of Detroit**, to put an end to DWSD's massive water shutoffs. Bankruptcy judge Steven Rhodes declared that, legally, there was no human or U.S. constitutional right to water and the financial structure of the city's municipal waterworks system was based on a "cost" basis, and affordability was not a "cost" under Michigan law. In 2016, the case was heard before the U.S. Court of Appeals Sixth Circuit and was co-argued

by ACLU Michigan attorney Mark Fancher. In a legal article he asked pointedly if mass water shutoffs are a strategy to purge Detroit's poor and posited that "any fee connected with a water affordability plan for the City of Detroit would be a user fee and not a tax." A recent report by the National Wildlife Federation and the Great Lakes Environmental Law Center reached a similar conclusion, i.e., that municipalities have the authority to adopt affordability plans within the scope of authority delegated by Michigan law.

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EMERGENCY MANAGEMENT: THE CREATION OF GLWA

The creation of the Great Lakes Water Authority was the culmination of years of attempts to wrest control of the water system from the city of Detroit, starting as far back as backlash to the 1974 election of Detroit's first Black mayor, Coleman Young, and continuing with the regular introduction of legislation in Lansing to create a regional water authority to supplant DWSD. (92)

First, it is important to understand that the white flight to the suburbs was heavily subsidized by Detroit's infrastructure. Between 1955 and 1973, 51 municipalities were added to Detroit's water system. The 1959 master plan population projections, under director Gerald J. Remus, show that through 2000, the city had planned its regional water infrastructure--in cooperation with municipalities -- for a population much larger than was eventually realized. With the pipes in place, the burden to pay for them was now on system users—a dilemma that would contribute to suburban leader resistance into the next century. By the 1980s, under Mayor Coleman Young, suburban municipalities built on their stigmatization of Detroit by making two public claims: (1) that suburban customer rate hikes were based on unjustified and unfair reasons, and (2) that the Detroit water system was untrustworthy and incompetent and, moreover, should be replaced with a suburban-majority water board. (93) By 2004, DWSD's 50-year master plan determined a \$9 billion capital improvement program, including projected growth in water demand and a potential expansion of the service area. It would be significantly scaled-down in 2013 to account for declining water sales, declining population growth, organizational restructuring with the end of federal oversight, and ongoing discussions for a new regional authority.

Through decades of strife, the regional takeover of DWSD was not possible until former Governor Rick Snyder supplanted municipal self-government with Emergency Manager Kevyn Orr. It is important to note the direct link between democratic disenfranchisement via emergency management, and lack of access to water in Michigan.

In 2012, voters across the state voted overwhelmingly via referendum to repeal the Emergency Manager law. (94) Within two months of voters directly rejecting Emergency Management, then-Governor Snyder signed into law a slightly restructured Emergency Manager law, which included an appropriation making it immune to direct referendum. (95) In the wake of the reinstatement of emergency management, majority-Black cities and school districts had their right to local democratic representation removed, prompting multiple lawsuits. (96) The Flint water crisis, as well as the most egregious waves of water shutoffs in Detroit, followed the imposition of emergency management, pointing to the dangerous public health outcomes associated with a loss of checks and balances in local government, (97) and underscoring the connection between access to water and political power.

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GLWA AS STRUCTURAL INEQUALITY: THE PAST IS PRESENT

From the start of GLWA's creation, Detroit residents drew the short straw. The system was undervalued, resulting in less money for the city based on the lease agreement. The city was responsible for 83% of the costs to maintain stormwater treatment plants and combined stormwater/sewer lines in Detroit. Detroit's representation on the six-person GLWA Board, however, was limited to two seats, or a third of decision-making authority. Despite the ruse that the city still "owns" the water system, Detroit residents must still pay GLWA a prorated share of its own lease, and Detroit must keep up with its obligations in the agreement or risk losing more control of its own water system.

In early 2015, GLWA stakeholders sought to address a growing awareness of regional water affordability concerns alongside Detroit's by convening a workgroup to define and establish an assistance program for residential customers across the regional authority called the Water Residential Assistance Program (WRAP). Sierra Club Great Lakes was invited to participate in the process and gained the inclusion of MWRO and Detroit People's Platform (DPP) representatives. As the workgroup developed terms for eligibility, program metrics, and public education for an assistance program, the community organization members sought to educate workgroup members on the difference between assistance and affordability, (98) and long-standing needs for the latter. As workgroup facilitators pushed for sign-offs on the assistance program components, Sierra Club, MWRO, and DPP representatives resigned in protest when told the WRAP design would not be based on low-income components of the Water Affordability Program.

Since 2014, roughly 140,000 homes in Detroit have had their water shut off, some multiple times. The city's defense of old programs and the introduction of new and egregious policies were not met by silence. Many Detroit water activists, along with a few city council members, in 2014 pushed for the adoption of the original Water Affordability

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Program based on income and urged a moratorium on shutoffs. The allies have tried many tactics to tie public health with affordable water and sanitation to stop disconnections. The fight, led by the People's Water Board Coalition, We the People of Detroit and other frontline groups, continues to this day. In the years since, PWBC has co-drafted water rights bills in Lansing; (99) coordinated with Flint activists to get busloads to testify in state capitol hearings; rallied residents statewide on World Water Day every March 22nd to meet with Lansing legislators; co-convened two successful international social movement gatherings on water and housing with activists, attorneys and policymakers in more than two dozen states and territories, plus six nations; marched to Flint; and have been arrested in peaceful protests in Lansing and Detroit to bring attention to these humanitarian, moral, and human rights issues. They have held press conferences with faith leaders and elected officials, given dozens of interviews, spoken on college campuses, and written articles and editorials to educate the wider public on the humanitarian, moral and public health obligations to protect our most vulnerable residents. State legislative support for the 'water package of bills' has been led by State Senator Stephanie Chang.

In fall 2014, two United Nations Special Rapporteurs accepted an invitation by civil society organizations (MWRO, PWBC, Food & Water Watch and the Council of Canadians) to meet with Detroit residents to investigate potential human rights violations on water shutoffs and water bill liens on residential property taxes. Following their two-day visit which included a discussion with impacted residents and their attorneys, a bus tour through Detroit and Highland Park to meet residents in their homes, a large public town hall forum at a community college, and a private meeting with Mayor Duggan and his administration. The Special Rapporteur on Water and Sanitation concluded in a press release, "I heard testimonies from poor, African American residents of Detroit who were forced to make impossible choices – to pay the

water bill or to pay their rent," said Ms. de Albuquerque. "It is contrary to human rights to disconnect water from people who simply do not have the means to pay their bills" (100) They also observed that the measures taken so far by local authorities had been of no help to residents who are chronically poor and face water shutoffs, plus the city had failed to maintain any data on how many people have been living without tap water.

To demonstrate the scope and scale of the problem, the We the People of Detroit Research Collective published in 2016 an impressive community-based research project, "Mapping the Water Crisis: The Dismantling of African American Neighborhoods in Detroit," to document water shutoffs against race and other socioeconomic factors against the historical context of the DWSD system. (101) In addition, they and Hydrate Detroit have continued to provide cases of potable water to residents across the city on an emergency basis for humanitarian and health concerns.

When Gretchen Whitmer was elected governor in November 2018, water affordability advocates urged her to issue an executive order establishing a moratorium on water shutoffs based on the health risks they posed, and until an affordability plan could be adopted. With the advent of COVID-19, PWBC led a Governor-targeted campaign to insist that public health protections be addressed for low-income residents through water service restorations. In a joint press conference on March 9, 2020, The Governor and Detroit Mayor held a joint press conference to announce that water would be restored for disconnected households to allow for hand-washing to prevent the spread of the coronavirus. On March 28, 2020, Governor Whitmer followed up with a statewide executive order requiring the restoration of water service to residential customers across the state, plus offered a \$2 million Water Restart Grant Program to help communities comply with the order. (102) After several extensions, this de facto moratorium on water shutoffs is set to expire on December 31, 2020.

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Locally, Detroit City Council by President Pro Tempore Mary Sheffield and Councilmember Raquel Castañeda-López are leading a coordinated effort with frontline groups to enshrine the basic human rights to water and sanitation in the city's charter.

In addition to the restoration of water service, Executive Order (EO) 2020-28 requires public water suppliers to provide monthly updates on the status of water reconnections to report efforts made to determine affected, occupied residences without water; the number of households without water due to non-payment, and the number of residences without water for other reasons (e.g., plumbing). Additionally, the water utility must certify that they have made best efforts to determine this data. This EO is not only an unprecedented action to require public water utilities to investigate and report this data but it underscores the nature and scope of water insecurity across Michigan. Early reports to EGLE from DWSD indicated far fewer reconnections were done than anticipated by grassroots activists who have been following the number of disconnected customers and reports by DWSD officials. (103) The documentation reports also demonstrated a need for closer examination and oversight by the state of water operator connections, reconnections and lien actions, as indicated in the ramping up of EO compliance orders. (104)

The struggle continues to ensure safe, clean, and affordable water for Detroit residents. An important recent development is a class-action lawsuit filed in July 2020 in federal district court by the ACLU of Michigan and several co-counsel, Taylor et.al v. City of Detroit, Governor Gretchen Whitmer, et.al, (105) asserting Detroit's water shutoff policy violates the civil rights of thousands of the city's residents by forcing them to live without a service essential to their health, which disproportionately affects Black Detroiters in violation of the Fair Housing Act and the Elliott-Larsen Civil Rights Act.

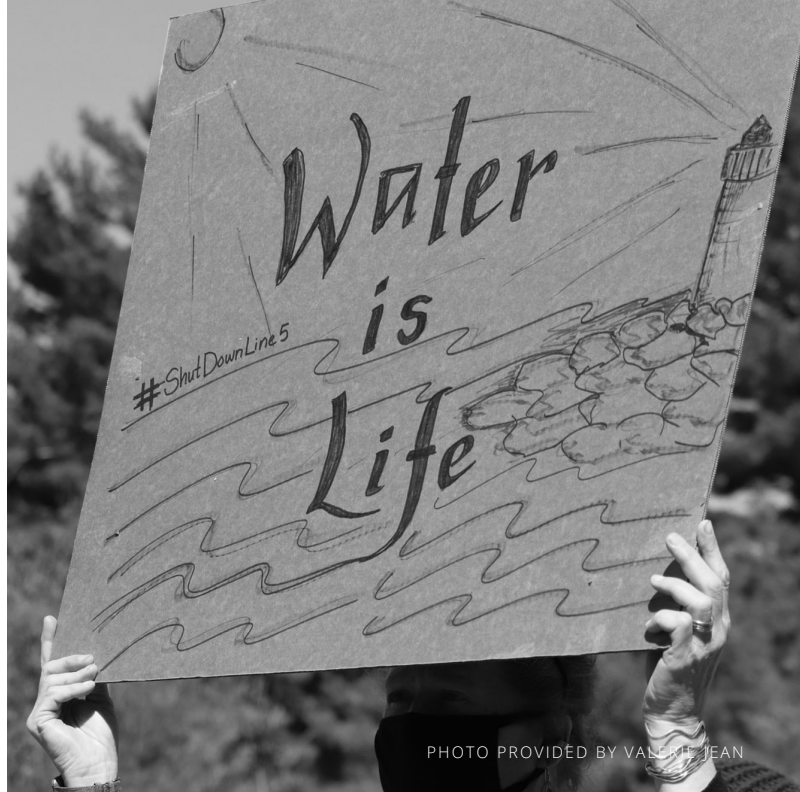


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B) CHALLENGES FOR SMALL TOWNS AND RURAL COMMUNITIES

RAISING WATER TANKS AND WATER RATES IN BENZIE COUNTY'S VILLAGE OF BEULAH

For residents in the small Northern Michigan Village of Beulah, water bills have more than doubled--from about \$660 per year for a family of four to about \$1,500 per year--to pay for the replacement of an aged water tank and about 9,000 feet of water mains. (106) The population of Beulah is only 216, with a median household income of \$46,042, well below the state median of \$54,938. (107) According to Michigan Department of Environmental Quality (MDEQ) documents, Beulah's water tank violated the Safe Drinking Water Act in three ways; (1) at 50,000 gallons, the tank was not large enough to meet domestic and fire flow demands, (2) there was a lack of inspection records to guarantee that the tank was water-tight and free of potential contamination, and (3) there was a lack of security measures to protect the tank from trespassers. These multiple violations prompted the MDEQ in 2014 to issue the village a notice of violation and administrative consent order. Originally in 2007, the design and placement for the new water tower were decided; however, this was abandoned after the anticipated costs of the project led to a public outcry. To remediate the 2014 drinking water violations, the village was required to replace the water tank to the tune of \$800,000 as well as replace approximately two miles of aging and damaged water and sewer main, which cost an additional \$3.1 million. All in all, the village had to finance these projects with a \$3.9 million, 2% interest rural development loan by the U.S. Department of Agriculture (USDA) to be paid back over the next 40 years. (108)

References:

- 106) Brandt Burgess, Patti (Apr. 8, 2018). Water tank woes. Record Eagle. Retrieved from: https://www.record-eagle.com/news/local_news/water-tank-woes/article_e7df6baf-24dc-5353-9d1a-91c2e1102e51.html
- 107) Data USA (2020). Beulah, MI: Census Place. Retrieved from: <https://datausa.io/profile/geo/beulah-mi>
- 108) Brandt Burgess, *supra*, note 106.

RAISING WATER TANKS AND WATER RATES IN BENZIE COUNTY'S VILLAGE OF BEULAH

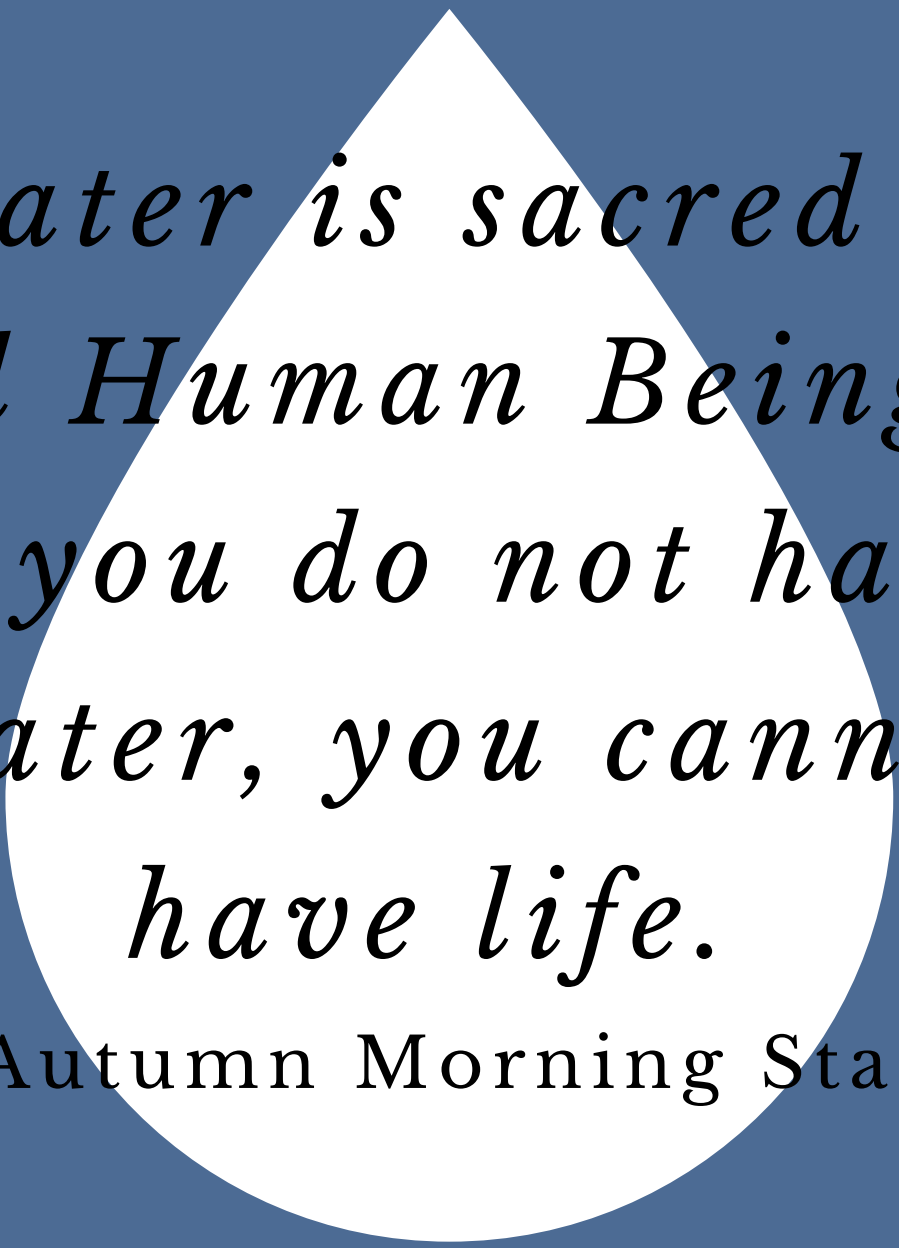
In rural areas where households rely on private residential drinking water wells and septic systems, vulnerable residents can experience disproportionate water contamination from unprotected drinking water sources. Water quality and wastewater safety in rural communities are often uncertain in the absence of systematic monitoring of wells and septic systems, and low-income homeowners generally lack financial support for maintenance costs. To protect the environment and public health, the best solution may be to build new public water supply and/or sewerage systems to replace residential wells and septic systems. But this option, too, entails significant costs.

For example, a 2015 study from Michigan State University showed the Kalamazoo River had one of the highest *E. coli* bacteria levels in the state, and attributed this primarily to failing septic systems in the region. (109) After determining that nearly 60% of septic systems in Oshtemo Township in Southwest Michigan failed to meet current standards, the township decided to install a community sewerage system and require homeowners to connect to the new system. The project will be funded by a pair of 40-year loans from the U.S. Department of Agriculture. To pay the loans, Oshtemo Township will use \$10 million from its general fund, paid in \$250,000 increments every year. The other \$18 million is being financed by the 890 households required to connect to the system. Connection charges average \$14,000 per household, but could range up to \$25,000 per home depending upon the distance of the home from the new sewerage line and location of the existing septic tank. If homeowners decline to hook up to the new system by the specified deadline, they can be fined up to \$500 per day. (110) In 2018, the median household income in Oshtemo was \$45,011 and an estimated 16% of Oshtemo households had incomes below the federal poverty level. (111) In May 2020, an association of 253 residents filed a lawsuit against their local government officials over the costs of a sewer expansion project. (112)

While infrastructure projects such as installing a community sewage system to replace residential septic systems can have enormous benefits for property owners as well as for public health and the environment, communities confronting these needs today often see few options other than to impose the full costs on their residents. Solutions for more equitable funding and financing of water infrastructure in Michigan must provide greater state and federal assistance for such communities.

References:

- 109) Feather, Andrew (Feb. 6, 2020). I-Team: Citing cost prohibitions, Oshtemo homeowners challenge mandatory sewer connections. WWMT West Michigan News. Retrieved from: https://wwmt.com/news/i-team/sewer-shock-new-sewer-means-homeowners-stuck-with-huge-bills?fbclid=IwAR2zfA8GOj0EcaOCgADpI0n2An8RIM0untqCtghSa1Q_uLhsaj063f3H0IE
- 110) Id.
- 111) QuickFacts (2020). *Oshtemo charter township, Kalamazoo County, Michigan*. United States Census Bureau. Retrieved from: <https://www.census.gov/quickfacts/fact/table/oshtemochartertownshipkalamazoo-countymichigan/PE120219>
- 112) Miller, Kayla (May 19, 2020). Residents file lawsuit over mandatory sewer connections in Kalamazoo-area community. MLive. Retrieved from: <https://www.mlive.com/news/kalamazoo/2020/05/residents-file-lawsuit-over-mandatory-sewer-connections-in-kalamazoo-area-community.html>



*Water is sacred to
all Human Beings.
If you do not have
water, you cannot
have life.*

Autumn Morning Star

IV) KEY INSIGHTS



We are at a crossroads in history as socioeconomic upheavals are dramatically shifting political realities in the wake of the COVID-19 pandemic, global financial crisis, and nation-wide uprisings against police brutality and demands for solutions to address structural racism, and against the backdrop of the effects of extreme weather attributable to climate change. Communities are questioning long-standing fiscal, health, and public water services policies and racial narratives. Municipal water departments and political leaders are forced to respond to these mounting public health and infrastructure challenges. This convergence of crises and demands have dramatically changed our political, community, economic, and personal landscape, creating new possibilities for systemic change in Michigan unlike anything we've witnessed for several decades. Huge numbers of Michiganders are experiencing shared fears and vulnerabilities, along with mutuality and hope, that present themselves as opportunities to enact equitable policies and legislation.

Through background reports commissioned by WFAM, other analysis undertaken by project partners, collective organizational experience, and numerous conversations between project partners over the 15-month project period, the WFAM project has developed several key insights that frame our understanding of Michigan's water infrastructure funding shortfall and how it relates to the problems of water affordability and other water insecurity in Michigan. These insights are summarized here.

A) The current approach to financing water infrastructure, which places increasing pressure on ratepayers, is inequitable and unsustainable.

American Water Works Association (AWWA) recommends utilities use a full cost pricing model to allocate costs across ratepayers. (113) Full cost pricing calculates rates to directly cover all service and maintenance expenses. (114) This, in effect, passes all costs to the consumer.

With the exception of income-based rate structures, which limit water bills for low-income households to levels considered affordable, (115) water rates are generally regressive, in that they demand a greater share of low-income household budgets than they do of higher-income households. Regressive financing frameworks are less equitable than frameworks which distribute financial burdens to align with one's relative ability to pay.

Moreover, the current approach compounds other existing inequities. The inability of vulnerable communities to pay for much-needed water infrastructure means their infrastructure needs remain unmet, subjecting these already-vulnerable communities to greater risks of water insecurity and related health, social, and economic impacts. One way to limit the impact of increasing water rates on vulnerable communities is to adopt affordable rate structures, such as income-based rates. Income-based rates limit low-income ratepayers' water bills to an amount that is considered affordable. (116) While this provides protection for vulnerable communities against soaring water bills, these limitations on water bills impact the amount of revenue utilities can generate from these ratepayers. Where a significant segment of a utility's customers are low-income households, these utilities will be forced to forgo needed water infrastructure repairs and upgrades unless they can access alternative and supplemental funding sources.

Water rate models that provide affordable water and otherwise align with the values of social equity, public health, universal service, ratepayer affordability, environmental stewardship, and distributive justice are a very important component of the set of solutions needed to address Michigan's water infrastructure funding/financing and equity crises. But, as noted, relying solely on ratepayer revenues to keep up with escalating costs puts a greater burden on municipalities to provide affordability plans. It is essential that both the most vulnerable communities and ratepayers as a whole are protected against higher, unaffordable rates. The only solutions are to spread the costs of affordability in some fair manner across all ratepayers based on the ability to pay or to find sources of revenues outside of the cost-revenue-debt-asset ratepayer framework, or both.

Members of communities struggling with water that is not affordable have developed a set of ten principles to guide the development of any water affordability plan. (118) Water equity advocates in Michigan have been calling for equitable water rate structures for well over a decade, particularly income-based models similar to that recently implemented in Philadelphia. Bills that would require statewide affordability standards for water bills have been pending in the Michigan Legislature. (119) Given the extensive work that has been done in this area, this report does not focus in-depth on affordable rate structures or design.

Even where the most vulnerable communities are protected against soaring water bills by affordable rate structures or other affordability programs, increased reliance on ratepayers to fund the scale of investment

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needed to rebuild Michigan's water infrastructure is unsustainable. Although water rate increases may have, to date, remained manageable for a majority of ratepayers, it must also be noted that many water infrastructure investments have been delayed, as indicated by the disparity between Michigan's estimated infrastructure investment needs and the actual amounts invested each year. (120) And, under the current utility business model, water rates are expected to continue to increase over the coming years, (121) driven in large part by the need to maintain and upgrade water infrastructure, which has fallen into a state of disrepair. (122) As previously noted, in 2018, the American Association of Civil Engineers gave Michigan a D+ rating for the state of its water infrastructure (123) and Michigan's 21st Century Commission determined in 2016 that the state needs to invest at least an additional \$800 million annually to make the state's water infrastructure fit for the 21st century. As was the case in the mid-20th century, when much of the state's water infrastructure systems were built, federal and state grants are needed again to support these essential needs.

Moreover, as more and more residential ratepayers are unable to pay soaring water rates, increasing reliance on residential ratepayers to bear a substantial share of the burden of water infrastructure costs is an unstable and insufficient resource for water utilities. The increasing difficulty for residential ratepayers, individually and collectively, to continue to absorb the costs of water infrastructure means that utilities are unable to pursue needed infrastructure projects, risking regulatory noncompliance and inefficiencies that can further add to their costs. ■

References:

- 113) American Water Works Association (2019). 2019 State of the Water Industry Report. Retrieved from: https://www.awwa.org/Portals/0/AWWA/ETS/Resources/2019_STATE%20OF%20THE%20WATER%20INDUSTRY_post.pdf
- 114) Id.
- 115) For an explanation of income-based rates, see Colton, R. (2005). A Water Affordability Plan for the Detroit Water and Sewer Department. Fisher, Sheehen, & Colton Public Finance and General Economics. Retrieved from: <http://www.fsconline.com/downloads/Papers/2005%2001%20Detroit%20Water.pdf>
- 116) Id.; See also Mack, E., et al (2020). *An Experiment in Making Water Affordable: Philadelphia's Tiered Assistance Program (TAP)*, Journal of the American Water Resources Assoc. (providing a preliminary assessment of income-based rates in Philadelphia). Retrieved from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/1752-1688.12830>
- 117) The Water Unity Table (Nov. 2018). *Ten-Point Water Affordability Plan*. Freshwater Future. <http://freshwaterfuture.org/wp-content/uploads/2020/07/Ten-Point-Water-Affordability-Plan.pdf>
- 118) Mack, E., *supra*, note 116.
- 119) See Michigan Senate bills cited in *supra*, note 99.
- 120) See *supra*, notes 26-32 and related text.
- 121) Mack, et. al, *supra*, note 21.
- 122) Id.; see also 21st Century Commission Report, *supra*, note 2.
- 123) Michigan Section of American Society of Civil Engineers. 2018 Report Card for Michigan's Infrastructure. Retrieved from: https://www.infrastructurereportcard.org/wp-content/uploads/2016/10/FullReport-MI_2018-FINAL-1.pdf



B) Funding and financing ‘solutions’ that fail to address, and provide viable alternatives to, the fundamental inequity and unsustainability of increasing burdens on residential ratepayers are not real solutions

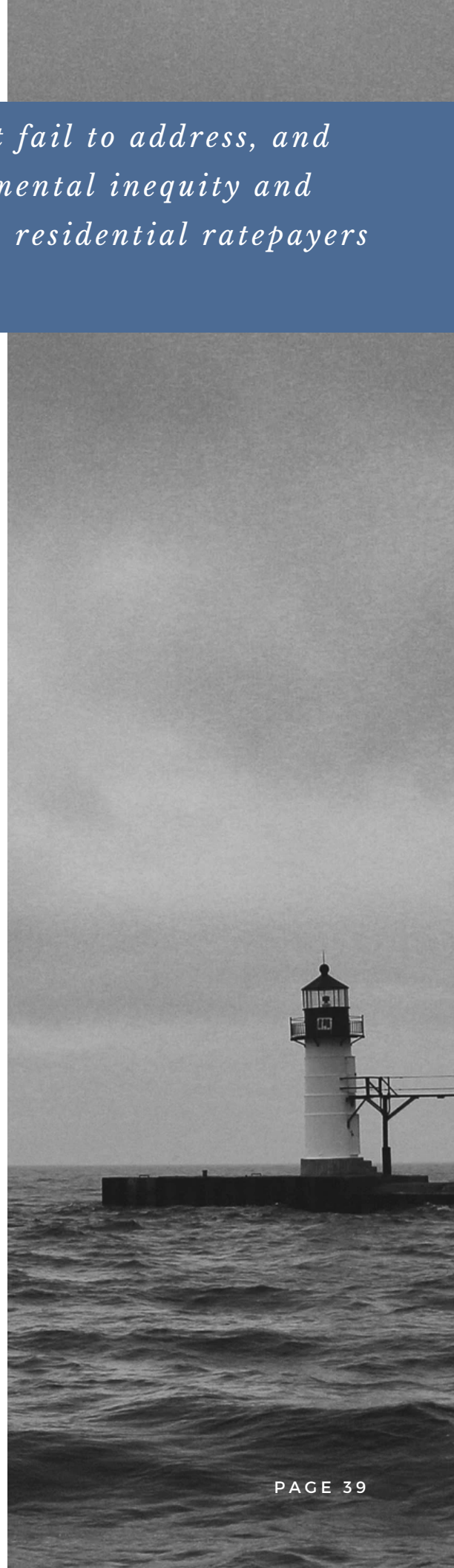
Some programs construed as water infrastructure funding solutions, such as the federal Water Infrastructure Finance and Innovation Act (WIFIA), have limited beneficial impact because, in essence, they simply prop up the current over-reliance on ratepayers. WIFIA authorizes federal funds to guarantee revenue bonds for water infrastructure projects, thereby lowering interest rates or making loans available to communities who otherwise could not qualify for financing. (124) While, of course, lower interest loans are slightly more manageable, WIFIA guarantees do little to address the fundamentally inequitable and unsustainable nature of the current approach of relying so heavily on ratepayers to foot the bill for water infrastructure capital investments. Ratepayers still wind up paying for the bonds as their bills reflect the principal and interest payments that must be made.

By removing a municipality's creditworthiness from the equation, WIFIA enables communities branded with a low bond rating due to existing overwhelming debt burdens to accumulate even more debt to be paid back by residential ratepayers. WIFIA does not, however, meaningfully address the underlying problem. The real problem is not just that some communities have low bond ratings, but rather that residents in communities with low bond ratings cannot afford to take on and pay back more debt. Hence, the solution offered by WIFIA is not really a solution at all. It simply channels more money from low-income residents in vulnerable communities to wealthy bond investors, through the payment of bond interest.

There is also the risk that SRF funding support could be reduced in favor of appropriating limited federal funds for WIFIA instead. This is a concern, especially for smaller communities and projects, which would receive greater benefit through the SRFs, particularly where zero-interest loans or additional subsidy are provided for the most disadvantaged communities.

References:

¹²⁴⁾ See <https://www.epa.gov/wifia>



C) A New Paradigm for Water Services, and How We Should Pay for Them

Solving these complex, challenging, intrinsically connected problems will entail more than throwing more money at the dual problems of failing water infrastructure and water affordability. We also need to critique and reform how we think about water infrastructure and the essential role it plays in supporting our individual and collective public health and wellbeing, social coherence and social stability, and our shared prosperity. This will, in turn, provide insight into how we should pay for water infrastructure.

In a recent article, Janice Beecher, of the Institute of Public Utilities at Michigan State University, traced the paradigms that have framed understanding of human-built water systems over the past century, and the shifting values they reflect. (125) As noted above, the build-out of community water services in the early part of the 20th century was largely motivated by public health--a service, not just the delivery of water through physical water infrastructure. As Beecher explains, this public-health paradigm morphed into a public-works paradigm characterized by substantial federal funding support for water infrastructure. Federal funding for water infrastructure peaked in the 1970s, with total public funding, including from state and local governments, peaking in 2010. Since then, in the face of a decline in public funding for water infrastructure, community water services adopted what Beecher terms a public-utility paradigm. (126)

The public-utility paradigm that prevails today “emphasizes commercialization and commodification through markets or market-like structures and mechanisms” and is “normatively technocratic and economic, with a discernible ideological undertone” that “extols enterprise autonomy and the ‘depolitization’ of utilities, if not their privatization.” (127) Under the public-utility paradigm, water is regarded as a priceable commodity and it is construed that “the public interest is served by the ‘laws’ of economics” by means of “rational” and “appropriate” price signals to improve efficiency and reduce waste. (128) In this mental model, water systems and its entire lexicon are deemed largely engineering and financing problems.

Beecher argues for a shift to a public-service paradigm, because water services confer both private and public benefits and thus should be understood as a social good and supplied through public infrastructure. The public-service paradigm regrounds water infrastructure, and how we pay for it, in a value of social equity. (129) Beecher proposes a water rate model to align with the public-service paradigm. (130) This public-service paradigm can also help to support a case for drawing on more state and federal funding, offered in the form of grants rather than loans repaid by water ratepayers.

References:

- 125)** Beecher, Janice A. Policy Note: A Universal Equity-Efficiency Model for Pricing Water Water Economics and Policy, Vol. 6, No. 3 (2020), World Scientific Publishing Company DOI: 10.1142/S2382624X20710010 <https://www.worldscientific.com/doi/10.1142/S2382624X20710010>
- 126)** *Id.* at 4-5.
- 127)** *Id.* at 4.
- 128)** *Id.* at 5.
- 129)** *Id.* at 6.
- 130)** *Id.* at 9-20



D) Recoupling Water Infrastructure and Equity through a Public Trust Framework

As Beecher rightly notes, “the social imperative to provide safe drinking water and sanitation services to individuals, households, and communities should be noncontroversial.” (131) And, indeed, the right to access safe, clean, affordable water, and the State’s corresponding duty to protect and provide this access, are deeply rooted in Michigan as key principles of the common law: (132) (1) the right to reasonable use of water in connection with the use or occupancy of land-based on riparian or groundwater law; (2) the right of reasonable use includes preferred or traditional uses such as drinking water, growing food, bathing, or other domestic purposes; (133) and (3) the rights of access and use by citizens of lakes and streams based on public trust law. Under public trust law, the state as sovereign holds water in trust for the benefit of its citizens for these special or paramount purposes, including navigation, fishing, sustenance, and bathing. (134)

Each state, as sovereign under the common law, has the power to determine the nature and extent of the public trust in its waters, including both navigable waters and groundwater, (135) and the duty to protect the public’s rights to use these waters. (136) Each citizen is a legally recognized beneficiary of the public trust, as noted above, for the right to certain public trust uses, including navigation, fishing, drinking water, sustenance, boating, bathing, swimming, and other forms of recreation. (137) The government is absolutely accountable to citizens, as legal beneficiaries of the public trust in water, to assure these waters and public trust uses are protected from substantial interference or impairment or alienated or disposed of for solely private purposes or gain. (138)

In addition, states have passed laws that recognize the “waters of a state” to include groundwater, lakes, and streams as a single hydrological system. (139) For example, in adopting the Great Lakes Compact, Michigan adopted the finding along with all of the Great Lakes states that the waters of the Great Lakes Basin are held in trust for the benefit of citizens. (140) Moreover, several other Michigan water and natural resources laws have declared a public trust in water. (141) For example, the Michigan Environmental Protection Act (MEPA) provides for the protection of the air, water, and natural resources and *the public trust in those resources from impairment*. (142) It is in this tradition that this legislative framework is recommended for funding and managing public water infrastructure services and equity in this report. (143) This framework includes a declaration of the public trust in water and in the delivery of public drinking water, treatment of wastewater, and management of stormwater as public goods and services. This, in turn, will protect the quality and reasonable use of the waters of the state by providing access to clean, safe, affordable water for all residents of Michigan.

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Common law public trust law affirms and ensures that the right of residents to the reasonable use of water in connection with property (144) and to access and use public trust waters for drinking, food, cooking, sanitation, and public health are never extinguished. Modern drinking water and sewerage systems have become the substitute for and replaced the private and communal water use systems of landowners and occupants which preceded modern community water systems. To make this shift, cities and towns passed ordinances requiring landowners and occupants to hook up to the municipal water systems, as provided for under Michigan municipal law. (145) Michigan courts have gone so far as issuing injunctions to compel local governments to implement public sewer systems where septic systems have failed and caused significant widespread pollution. (146) While residents may be required to relinquish their right to operate their own drinking water wells and septic systems and instead hook up to a community water service, in doing so residents do not relinquish their rights to access and use water as protected by the public trust in water. Instead, we should understand that relevant public trust rights and duties have transferred to the community water systems. Accordingly, it makes sense to update our understanding of the public trust in water to align with how most people access and use water in our everyday lives -- that is, through community water infrastructure systems and services. (147)

Public trust principles, then, can provide a framework to help reorient our understanding of human-built water systems, and how we should pay for them, by recoupling water infrastructure and equity. Our drinking water, wastewater, and stormwater systems exist to protect and deliver safe, clean, affordable water for hydration, sustenance, bathing, and health – the same uses that are protected under the common law in connection with ownership and occupancy of property, as well as the public common nature of water under the public trust doctrine. The recommended legislative framework would, in essence, extend public trust principles to the state's valuable public waters conveyed through Michigan's human-built drinking water, wastewater, and stormwater management systems. This would essentially recouple water infrastructure with public water service and equity, informing our understanding of these systems, their purpose, and how we should manage and pay for them. The separation and treatment of infrastructure based solely on a revenue-cost-asset-debt endeavor severs or seriously diminishes this function and duty to deliver public water as a public good and service. When public water infrastructure and service are united under the public trust principles that protect water and fundamental rights to water for drinking water and health, the state will fulfill its duty to serve all citizens and residents equitably. (148)

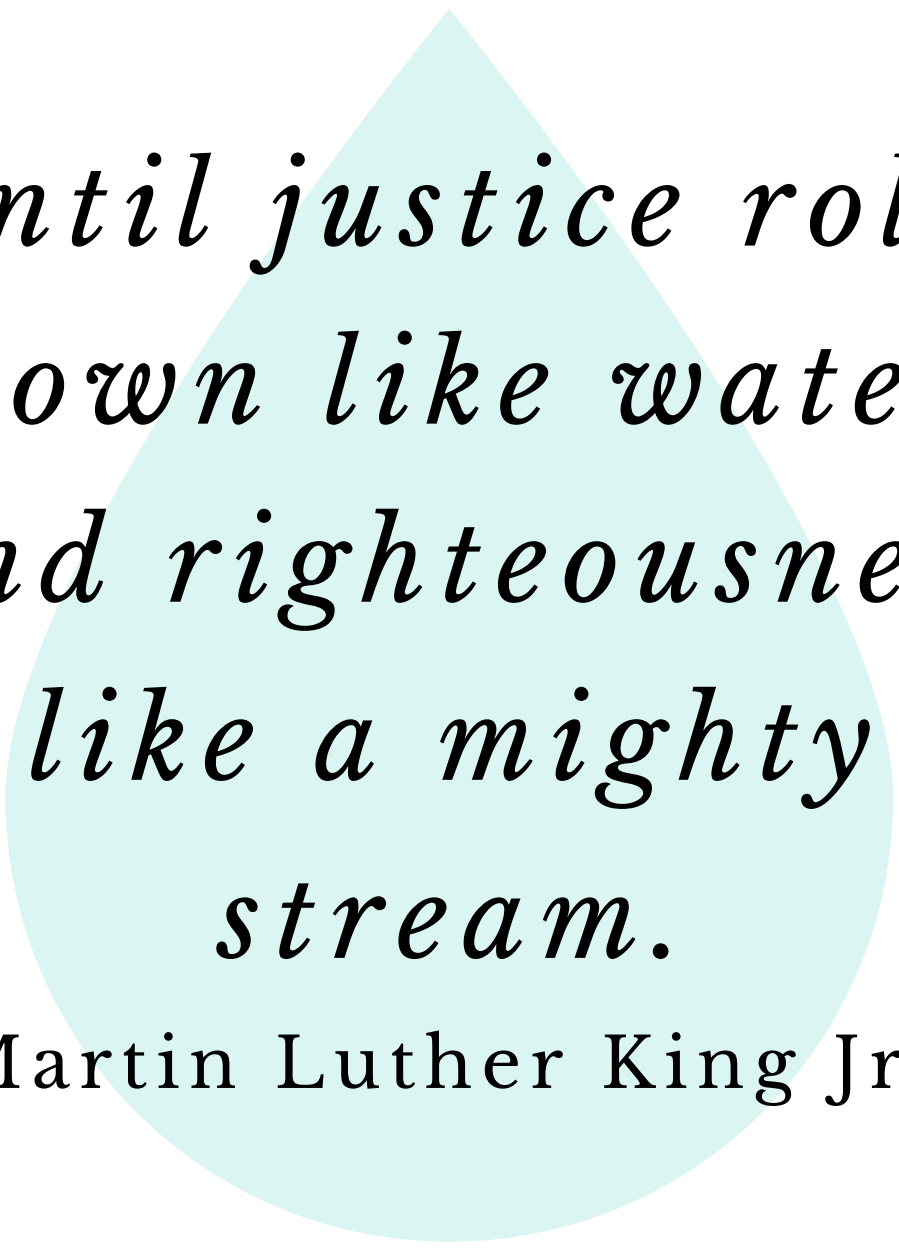
PHOTO PROVIDED BY VALERIE JEAN





References:

- 131)** *Id.* at 1.
- 132)** Olson, James (FLOW 2018). Water Law Legal Primer, Public Water Public Justice Report and Model Law (For Love of Water), Retrieved from: <https://forloveofwater.org/model-legislation/legal-primer>; see Appendix 5C.
- 133)** E.g. *Dumont v Kellogg*, 29 Mich 420 (1874); *Schenck v City of Ann Arbor*, 196 Mich 175 (1917). *Arnold v. Mundy*, 6 N.J.L. 1 (1821); *Illinois Central R Rd v Illinois*, 146 U.S. 387, 437 (1892);
- 134)** *Glass v Goeckel*, 473 Mich. 667 (2005). "The state of Michigan, upon admission to the Union, became vested with title to the beds of all the navigable waters, like unto the crown of England, or the crown and Parliament at common law. This state is committed to the common-law doctrine that riparian rights extend to the thread of rivers and into lakes, except the great lakes. It is necessary to go back to the common law to decide the claim that the title of the state is impressed with a perpetual trust under which rights of navigation, fishing, and fowling must be saved to the public." *Collins v Gerhardt*, 237 Mich 38, 44 (1926).
- 135)** *Montana PPL v Montana*, 565 U.S. 576 (2012) The courts in some states have explicitly extended the public trust in water to groundwater. See .e.g., *In re Water Use Applications ("Waihole II")*, 9 P.3d 409, 450-51 (Haw. 2000) ; *Kelly v. Oceanside Partners*, 140 P.3d 985, 1002-03 (Haw. 2006). *Lake Beulah Mgmt. Dist. v. Dept. of Nat. Resources*, 799 NW 2d 73 (Wis. 2011); *Ariz. Ctr. for Law in the Pub. Interest v. Hassell*, 837 P.2d 158, 170 (Ariz. Ct. App. 1991). While Michigan courts have not yet addressed the interface between groundwater and lakes and streams and the public trust doctrine, the legislature has recognized that groundwater, lakes, and streams are a single hydrologic system held in trust for the benefit of citizens. Part 327, MCL 324.327; see also, *infra*, notes 137, 138 and accompanying text.
- 136)** *Id.*; *Illinois Central*, *supra*, note 134.
- 137)** *Arnold v Mundy*, 6 N.J.L. 1 (1821); *Collins v Gerhardt*, 237 Mich 38 (1926); *Obrecht v National Gypsum Co.* 361 Mich 399, 105 NW 2d 143 (1960).
- 138)** *Illinois Central*, *supra*, note 134 at 447, 452-53; *Obrecht*, *supra*, note at 137, NW 2d 143. 149-151.
- 139)** VT. STAT. ANN. tit. 10 § 1390 (5) (2008) ("the groundwater resources of the state are held in trust for the public" and "manage groundwater resources . . . for the benefit of citizens who hold and share rights in those waters"); N.H. REV. STAT. ANN. § 233-A:1 (1993) ("bodies of freshwater . . . [more than 10 acres] . . . held in trust by the state for public use"); N.H. REV. STAT. ANN. § 481:1 (1985) ("[W]ater of New Hampshire whether located above or below ground constitutes . . . invaluable public resource which should be protected, conserved, and managed in the interest of present and future generations. The state as trustee . . . careful stewardship over all the waters"); N.J. STAT. ANN. § 58:11A-2 (West 1977) ("to restore and maintain the chemical, physical and biological integrity of the waters of the state, including groundwaters, and the public trust therein"); N.Y. ENVTL. CONSERVATION LAW § 15-1601 (McKinney 1989) ("All the waters of the state are valuable public natural resources held in trust by this state, and this stage has a duty as trustee to manage its waters for the use and enjoyment of present and future residents."). See also, the definition of "waters of the state," Part 31, NREPA, MCL 3101(z); Part 327, NREPA, MCL 327.32701(1) (qq).
- 140)** "The waters of the state are valuable public natural resources held in trust by the state, and the state has a duty as trustee to manage its waters effectively for the use and enjoyment of present and future residents and for the protection of the environment." Great Lakes-St. Lawrence River Basin Compact, Sec. 1.3(1)(a) (emphasis added). The Compact also recognizes that the waters of the basin "are a single hydrologic system." Sec. 1.3(1)(b); section 501a, Part 5, NREPA, MCL 324.501a (*Effective management of the waters of the Great Lakes... requires the in-basin exercise of such jurisdiction...in the interest of all of the people of the Great Lakes basin.*)
- 141)** E.g., MCL 30101 *et seq.* (lakes and streams); MCL 32502, 32503, 32505; MCL 324.1701 *et seq.* (Great Lakes); MCL 32702(1)(c), 325050 (groundwater, surface water, Great Lakes); MCL 324.31519 (dam removal); MCL 324.32606 (dams); MCL 324.34105 (groundwater, surface water, irrigation district agreements); Part 17, NREPA, MCL 342.1702, 1703 (MEPA) (public trust in air, water, and natural resources).
- 142)** Part 17, NREPA. MCL 324.1702, 1703(1).
- 143)** See *infra*, notes 149-159, and accompanying text.
- 144)** See, Olson, Public Water Public Justice Report and Model Law, *supra*, note 132.
- 145)** See, e.g., *Bedford Twp. v Bates*, 62 Mich. App. 715, 717-18 (1975).
- 146)** *DEQ v Worth Township*, 491 Mich 227 (2012).
- 147)** When confronted with the diversion of funds reserved for water infrastructure from a joint public water supply system, one court ruled that, because the municipalities' joint water system withdrew waters from a navigable river, the court ruled that the water and the public supply system were subject to the public trust doctrine. As a result, the court ordered the municipalities to return the funds from the revenues generated by the delivery of public trust waters to the joint public water system. *Clifton v. Passaic Valley Comm'n*, 539 A. 2d. 760 (N.J. 1987). See also Appendix 5B.
- 148)** See, *Waihole II*, *supra*, note 135.



*Until justice rolls
down like water
and righteousness
like a mighty
stream.*

Martin Luther King Jr.

V. RECOMMENDED FUNDING AND FINANCING OPTIONS

Investments in water infrastructure must be designed to deliver the equitable outcome of access to safe, clean, affordable water for all, not just better-maintained, updated infrastructure assets. Accordingly, to ascertain optimal funding and financing solutions to address Michigan’s water infrastructure funding gap, it is essential to take into consideration how the proposed funding or financing option will impact communities suffering from and/or vulnerable to water insecurity, not just as a side issue or afterthought, but as a central, fundamental concern. Some funding and financing options—including the current approach, which places an overwhelming burden on residential customers—simply compound both problems. But solutions designed to deliver water equity are also the most robust and sustainable solutions for addressing the water infrastructure funding shortfall.

This section sets out each of the key recommendations emerging from the WFAM project, including a summary assessment of how the recommended funding/financing options could help to achieve equitable and just outcomes.



1) ADOPT A LEGAL FRAMEWORK TO ENSURE PUBLIC WATER JUSTICE

The lead contamination of water in Flint, widespread water shutoffs in Detroit, water contamination resulting from the dam failures near the city of Midland, soaring water bills in the village of Beulah, and PFAS contamination of residential drinking water wells all exemplify the kinds of water insecurity experienced throughout Michigan. At the same time tens of thousands of Michigan residents are denied or forced to pay high water bills to access safe, clean water, companies who pay little or nothing to withdraw and package Michigan water for sale are reaping windfall profits from selling a billion gallons a year of water bottled in Michigan. Moreover, as explained and emphasized in this report, recoupling human-built water infrastructure and water as a service with satisfying the right to water for drinking, sustenance, and health recognizes the paramount public interest of water as a common source of security for each person. Not only does this common public water replenish watersheds that sustain life, community, ecosystems, and economies, but this same public water, when withdrawn and delivered through a public water system for the common good of the community, serves the same uses and purposes. As described above, the public trust in the waters of the state as a single hydrological system is not lost simply because that water enters the pipe and is delivered to residents. In fact, this public water retains its public trust nature to the extent it satisfies the traditional legally recognized public trust and water law purposes; and the State or, in the case of waterworks systems, the local government, as trustees, have a continuing duty to assure these traditional purposes or uses are fulfilled and protected. This public trust framework, then, becomes the overarching and essential framework for achieving an equitable and sustainable water supply to all of the residents and other water users in the community. **The comprehensive public water justice legislative framework described here would help to recalibrate—and fund—Michigan’s priorities of protecting its water and its people. (149)**



The recommended legislative framework must include the following components to ensure public water justice:

- (1) affirm the sovereign interest and public trust over water in statute;
- (2) affirm that the delivery of public drinking water, treatment of wastewater, and management of stormwater are public goods and services, the overarching purpose of which is to fulfill the public trust duty to benefit and protect for all residents the quality and reasonable use of the waters of the state by providing access to clean, safe, affordable water for all residents of Michigan;
- (3) prohibit the sale of the state's sovereign public water except for the sale of bottled water (150) provided that it is authorized by a royalty licensing system;
- (4) place royalties in a dedicated trust fund (151) to be used to address water affordability and other forms of water insecurity, provide grants for water infrastructure, and protect source waters;
- (5) require the Department of Environment, Great Lakes, and Energy (EGLE) to gather information about water and sanitation rates and shutoffs throughout the state, assess these against appropriate criteria to determine and publicly report on water affordability, (152) and periodically update and map the information and assessment to track progress in making drinking water and sanitation bills more affordable. (153)

Other than the requirement that water bottling operations in Michigan obtain a license and pay a per volume royalty on Michigan water bottled for commercial sale, the recommended legal framework would not affect any uses of public trust waters currently protected by Michigan law. In addition, any withdrawal of groundwater and spring water for the purpose of bottling the water for commercial sale must comply with state laws governing such withdrawals including, in particular, Michigan's water withdrawal rule. (154)

An independent analysis of the revenue-generating potential of a royalty licensing system for water bottling operations estimated that, if a royalty in the amount of 25 cents per gallon (\$.03 per 16 oz) was imposed, it could generate \$250 million in royalty revenues annually. (155) Without raising taxes or levies on Michigan residents, this would provide substantial and reliable revenues amounting to one-quarter of Michigan's estimated \$1 billion water infrastructure annual funding gap. According to the independent analysis conducted by a Michigan State University research team, the proposed royalties are unlikely to have a substantial impact on the bottled water market. (156) Indeed, the report predicts that water bottling operations are still likely to expand, including in Michigan, in line with current market trends. (157) Thus, the dedicated fund established through the legislation would provide reliable revenues, year after year, to help address Michigan's water affordability, water infrastructure, and water quality protection needs.

Although a very slight increase in the cost of bottled water is expected following implementation of the proposed licensing and royalty scheme, this would partly be absorbed by bottled water purchasers outside of the State, as Michigan supplies a substantially larger share of the national bottled water market than it consumes. (158) To the extent that any increase in the price of bottled water is a concern for low-income residents who do not otherwise have access to safe, clean, and affordable water, it should be emphasized that wherever such access is compromised for Michigan residents, whether due to affordability challenges, contamination, or other emergencies, resources from the trust fund could be mobilized to provide

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emergency water supplies to impacted persons and communities. Moreover, the fund would be prioritized to address water affordability concerns by providing grants to support water utilities' adoption of affordable rates and affordability programs for low-income customers, thus preventing water shutoffs and alleviating the need for these households to rely on bottled water. (159)

It is very important, too, that the recommended legal framework would confirm, in statute, the State's sovereign ownership and public trust principles in the waters of the state described in Section IV above. These include: (i) the waters of the state are held in public trust and subject to the duty to benefit and protect the quality and reasonable use of the hydrologically connected lakes, streams, and groundwater sources that are withdrawn, distributed, collected and discharged through the public water supply systems; to residents; (ii) the people of Michigan are the beneficiaries of the public trust in water, and accordingly have a right to access safe, clean, affordable water; (iii) the delivery of public drinking water, treatment of wastewater, and management of stormwater are public goods and services, the purpose of which is to fulfill the public trust duty to benefit and protect for all residents the quality and reasonable use of the waters of the state by providing access to clean, safe, affordable water. The recognition and declaration of these public trust principles will enable state officials, water system administrators, and Michigan courts to make decisions and take actions necessary to safeguard water and ensure that clean, affordable water is available to all.

The dedicated trust fund established by the legislative framework would be used for public purposes, with priority given to grants that would help make drinking water and sanitation affordable for families struggling to make ends meet and for emergency water assistance in response to public health crises or other emergency situations in which access to safe, clean drinking water or safe sanitation services are compromised or imminently threatened. Eligible expenditures from the trust fund would include grants to:

- support water utilities' adoption of affordable rate structures and affordability programs for low-income residential customers.
- provide resources to communities facing public health emergencies or other equivalent needs to ensure all residents have access to potable drinking water and sanitation.
- fund water infrastructure projects for community water systems that have adopted affordable rate structures and affordability programs, with priority given to the most economically distressed communities.
- address safe drinking water and sanitation issues in small, rural communities without any or inadequate community water supply or wastewater systems, with priority given to the most economically distressed communities.
- protect source waters.



EQUITY BENEFITS OF ADOPTING A LEGAL FRAMEWORK TO ENSURE PUBLIC WATER JUSTICE

Clearly grounding this comprehensive legislative framework in the public trust in water would have profound benefits for communities impacted by water shutoffs, contaminated drinking water, and other water insecurities. The royalty licensing scheme established by the framework would generate substantial funding which, as a practical matter, is needed to provide practical solutions to long-standing, systemic, and entrenched water injustices and water inequities. The framework is not just about raising funds, however. The recommended framework is, most essentially, about the equity in assuring adequate funds to assure access to drinking water and health that are protected by the common law and public trust water as applied to public trust water conveyed through water supply systems and water infrastructure. (160) The framework would (1) clarify, in statute, that the public trust in water extends to Michigan surface water and groundwater water that is withdrawn, treated, distributed, collected and discharged through public water supply, community, and noncommunity water systems -- in other words, the water conveyed through drinking water, wastewater, and stormwater infrastructure; (2) confirm and declare, in statute, the right of all Michigan residents to access safe, clean affordable water and the corresponding duty of the state to safeguard that right and to safeguard and protect the public waters on which all in Michigan rely for their health, well-being, and livelihoods. The framework would clarify that water utilities exist to provide water services to the people, to fulfill the public trust in water by making water available for the needs of Michiganders in our 21st century context -- in other words, a modern-day iteration of the State's classic, public trust duty to safely steward Michigan waters for the benefit of all the people of Michigan, for their sustenance, health, and livelihoods.

Requiring the state to measure, report on, and monitor water affordability in Michigan will provide data and tools that impacted communities can access and utilize to hold state officials accountable to uphold these public trust duties. This monitoring will also enable Michigan officials, lawmakers, communities, and advocates to identify persistent water affordability problems and, over time, develop and document insights about the kinds of interventions that are most effective in tackling water affordability challenges and other water insecurities and inequities that can arise in different kinds of settings and circumstances. Relatively little is known, for example, about the extent of water insecurities in Michigan's small towns and rural areas, as compared to in Flint and Detroit where water equities and injustices have been more comprehensively catalogued and analyzed over recent years.

For all of these reasons, the recommended comprehensive legal framework presents an opportunity for Michigan, one of the most water-abundant states in the nation but also infamous for the Flint water crisis, to provide a counterexample for the country by modelling how to protect public water; support and stabilize water utilities doing the essential work of making this public water accessible to Michigan residents for drinking and sanitation; and protect the right of all to access safe, clean, and affordable water through a framework of accountability and public service grounded in public trust principles.

References:

- 149) See Olson, Public Water Public Justice Report and Model Law, *supra*, note 132.
- 150) "Sale of bottled water" means water withdrawn from a water source or public water supply and transferred or diverted to a plant or other facility for the sale of water in a container or package of not more than 5.7 gallons. The prohibition would not apply to any one of the following: (1) the withdrawal, treatment, distribution and delivery of water services by a public or private water utility or community public water supply or waterworks system (this exception does not apply to the distribution or delivery of water to a person who receives water from a public waterworks or public water utility system for the purpose of the sale of bottled water); (2) products into which water from a private well or public waterworks system or public water utility is incorporated or water incorporated into or used in a product other than water itself (Note: it is declared for purposes of this Act, that water cannot be incorporated into itself and therefore is not a product); (3) the sale of water on premises from a private well or public waterworks system in a glass, bottle or other container, incidental to a wholesale or retail restaurant, food service or other business or commercial operation.
- 151) See e.g. Natural Resources Trust Fund, MCL 324.1901 et seq.; Michigan Conservation and Recreation Legacy Fund, MCL 324.2001 et seq.; Environmental Protection Fund, MCL 324.503a; Land Exchange Facilitation Fund, MCL 324.2134; Groundwater Discharge Permit Fund, MCL 324.3124.
- 152) There is a serious gap in the lack of information or lack of proof claimed by municipal water departments and what has been reported and mapped through citizen information-gathering projects; Kurth, Joel (26 Feb 2020). Detroit Says No Proof Water Shutoffs Harm Health, Get Real, Experts Say, Bridge Magazine, Retrieved from: <https://www.bridgemi.com/michigan-health-watch/detroit-says-no-proof-water-shutoffs-harm-health-get-real-experts-say>; We the People of Detroit (2016). Mapping the Water Crisis" The Disarming of African-American Neighborhoods in Detroit: Volume One. Retrieved from: <https://www.wethepeopleofdetroit.com/community-research>. For example, see Gaber, Nadia (12 June 2019). Mobilizing Health Metrics for
- 153) the Human Right to Water in Flint and Detroit Michigan, Health and Human Rights Journal, Retrieved from: <https://www.hhrjournal.org/2019/06/mobilizing-health-metrics-for-the-human-right-to-water-in-flint-and-detroit-michigan/> Section 32723, Part 327, MCL 324.32723.
- 154) See Appendix 4C.
- 155) See Appendix 4C.
- 156) See Appendix 4C; Americans consumed 14.4 billion gallons of bottled water in 2019, up 3.6 percent from 2018. Bottled water's retail dollar sales also grew in 2019, up 5.2 percent reaching \$34.6 billion. And per capita consumption rose 3.1 percent to 43.7 gallons, BMC data show. [https://www.theshelbyreport.com/2020/05/21/bottled-water-consumption-increases/#:~:text=Americans%20consumed%2014.4%20billion%20gallons,43.7%20gallons%2C%20BMC%20data%20show.](https://www.theshelbyreport.com/2020/05/21/bottled-water-consumption-increases/#:~:text=Americans%20consumed%2014.4%20billion%20gallons,43.7%20gallons%2C%20BMC%20data%20show.;); https://www.huffpost.com/entry/conned-drinking-bottled-water-how-we-stop_n_5f578dc3c5b6946f3eb72489
- 157) See Appendix 4C.
For example, in Hawaii water allocation decisions by public officials seek to
- 158) balance groundwater and stream flows to assure rights to access to adequate
- 159) water for all interested persons, with a preference to traditional water law uses.
Seventy-five percent of Michigan's public water supply systems are served by 70 public surface water intake stations. Michigan's Water Assessment
- 160) Program (EGLE, Dec. 2004). Retrieved from: https://www.michigan.gov/documents/DEQ-swap99_4707_7.pdf



(2) COMMIT TO FUNDING WATER INFRASTRUCTURE AS A PUBLIC GOOD, AND GENERATE MORE STATE REVENUES TO ADDRESS MICHIGAN'S WATER INFRASTRUCTURE FUNDING GAP

Federal funding for water infrastructure has fallen dramatically after peaking in the late 1970s. ¹⁶¹ As a result, the burden of paying for water infrastructure has fallen to ratepayers, in part because the State has not sufficiently stepped up to help carry this burden. Although it is expected that federal funding will increase in upcoming years, for Michigan to address its \$1 billion water infrastructure funding gap, additional state revenues are also needed.

Michigan must commit to (1) generating significantly more state revenues to pay for water infrastructure and protect source waters, and (2) ensuring that these revenues are generated in an equitable manner. Moreover, Michigan should aim to generate more revenues from statewide taxes, rather than relying primarily on municipal revenue and general obligation bonds. Michigan should also aim to provide more assistance to communities, particularly communities experiencing the greatest hardship, in the form of grants (or principal forgiveness) rather than as loans.

This will require a deep commitment from the legislature, municipalities, the state executive branch, and the public to fund water infrastructure as a public good. We pay for other public goods and services collectively, such as for roads, schools, and fire protection, just to name a few. Like these, our water infrastructure and services are foundational to our collective well-being and economic prosperity. The current pandemic also underscores the need to provide drinking water and sanitation services to all as a public health imperative, regardless of ability to pay.

Michigan needs to recalibrate its approach to paying for water infrastructure, to ease the burden currently placed on residential ratepayers and municipal water departments. While the recommended legal framework for public water justice will support the cost of structural affordability or affordability plans and emergency health and water needs as well as grants for infrastructure projects without further burdening Michigan taxpayers, it will still be necessary for state taxpayers to carry more of the water infrastructure load, too. Several options which could generate substantial additional state revenues for water infrastructure without increasing the tax burden of the vast majority of Michigan taxpayers are suggested for further consideration: a graduated income tax; a surtax on income in excess of \$1 million, earmarked for water infrastructure; and/or a state general obligation bond issuance earmarked for water infrastructure.

Without further tax reform, the bond option would distribute costs across Michigan taxpayers, but the suggested tax options would place the vast bulk of the additional tax burden on those most able to pay, in line with increasing calls across the country, including in Michigan, for the wealthiest to pay their fair share. The bond option would increase the ultimate cost of fully meeting the State's water infrastructure needs. This is because less infrastructure can be purchased for each dollar borrowed as compared to making dedicated tax revenues, directly available to fund public water services and infrastructure, once interest paid to bond investors is factored in. For these reasons, Michigan should shift away from relying primarily on bonds to meet its water infrastructure needs and seriously consider the tax options discussed below.

MORE →

(a) Replace Michigan's flat tax rate with a more equitable Graduated Income Tax.

Michigan is currently one of only nine states that have a flat state income tax, while a majority of other states have a graduated income tax (GIT). (162) Michigan imposes a flat income tax of 4.25% on all incomes and provides for non-income based exemptions. (163) Article 9, section 7 of the Michigan Constitution prohibits the implementation of any income tax graduated as to the rate or base. (164) Thus, amendment of this state constitutional provision would be required for Michigan to adopt a GIT.

Notwithstanding this formidable hurdle, conversations exploring potential impacts of a GIT in Michigan have begun, coordinated through a progressive revenue table. Table partners are considering efforts in the future, and have begun examining opportunities for progress.

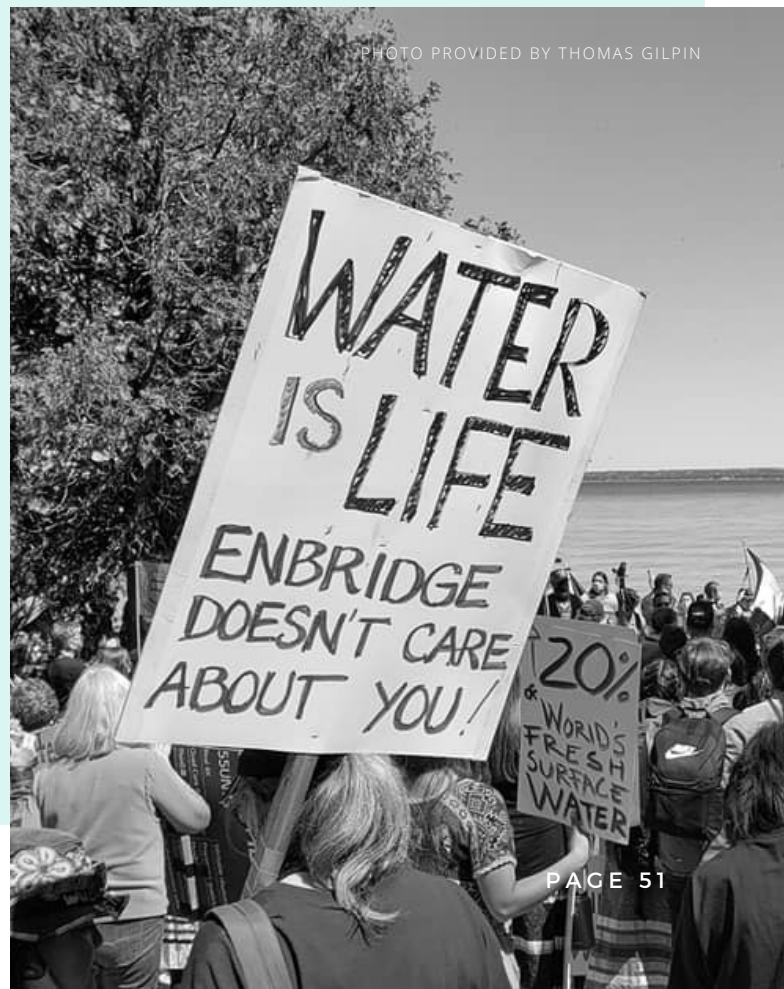
Since 2000, Michigan's general fund has dropped 30%. As a percentage of the state's aggregate personal income, Michigan is collecting \$15 billion less income tax annually than in 1972, and \$3 billion less than the national average. Yet, the remaining burden is not equitably distributed: families below the poverty line contribute over 10% of their income to state and local taxes, while the rate for millionaires hovers at around 6%. (165)

Theoretically, a GIT in Michigan could cut taxes for 90% of Michiganders, while increasing taxes on those with income over \$175,000. Such a proposal would raise an additional \$1.5 billion annually over Michigan's current tax structure; and increased revenues could be allocated primarily to schools and infrastructure, including roads as well as water infrastructure. (166) A measure like this could also prohibit a return to a flat income tax.

References:

- 162)** Federation of Tax Administrators, State Individual Income Taxes, Retrieved from: https://www.taxadmin.org/assets/docs/Research/Rates/ind_inc.pdf
- 163)** Michigan Department of Treasury, New Developments for Tax Year 2019, Retrieved from: <https://www.michigan.gov/taxes/0,4676,7-238-43513-454549--,00.html>
- 164)** MI CONST Art. 9, § 7.
- 165)** See generally Michigan League for Public Policy. Who can pay more? The case for a Graduated Income Tax. Retrieved from: <https://mlpp.org/who-can-pay-more-the-case-for-a-graduated-income-tax/>
- 166)** Id.

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(b) Adopt a Surtax Earmarked for Water Infrastructure.

Other states have taxes earmarked for water infrastructure. One example is Minnesota's Legacy Fund, a state sales tax designated for arts and culture as well as watershed protection. (167) Sales taxes are generally regressive, however, and thus would disproportionately burden low-income families already struggling to pay for basic living costs, including water and sanitation bills. Instead, WFAM recommends consideration of a state surtax on income in excess of \$1 million. As for any graduated income tax, adopting a state surtax would require amendment of Michigan's Constitution. Once this political hurdle was overcome, however, the implementation and administration of a surtax on the state's highest earners would be fairly straight forward. While such a tax may have the look and feel of a wealth tax in terms of public perception, in fact it would be much easier to design, implement, and administer than wealth taxes, which would likely be subject to a raft of legal challenges.

Unlike a graduated income tax, a surtax is a tax levied on top of another tax, typically applied to the income of individuals and businesses whose income exceeds a certain threshold. Also, a surtax is generally assessed to fund a specific government program, whereas regular income taxes or sales taxes are used to fund a variety of programs. (168) Thus, one unique feature of a surtax is that it allows taxpayers to more easily see how much money the government is collecting and spending for a particular program.

Based on 2017 tax filings, more than 17,700 Michigan tax filers reported more than \$1 million in taxable income, a collective \$95.9 billion. Although comprising less than 0.4 percent of Michigan taxpayers, they accounted for 26 percent of all income reported. (169)

References:

- 167) Minnesota's Legacy: Clean Water, Land and Legacy Amendment, Retrieved from: <https://www.legacy.mn.gov/about-funds>
- 168) There are several examples of surtaxes applied on top of federal taxes. In 1968, for example, a 10% surtax was imposed on individual and corporate income to help pay for the cost of fighting the Vietnam War. The surtax was collected on income after the ordinary federal income tax was assessed. While most taxpayers probably did not know what percentage of their tax dollars were going toward military spending, they could easily see how much extra money they were being asked to contribute specifically to the war effort. In 2004, California voters passed the Mental Health Services Act, which provides for a one percent income tax on personal income in excess of \$1 million per year to fund access to mental health services.
https://mhsaac.ca.gov/sites/default/files/MHSA%20Jan2020_0.pdf
- 169) Oosting, Jonathan (Mar. 4, 2020). Michigan's income gap is widening. Time for Democrats to soak the rich? Bridge Magazine, Retrieved from: <https://www.bridgemi.com/michigan-government/michigans-income-gap-widening-time-democrats-soak-rich>

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(c) Authorize a State General Obligation Bond to finance, directly, public water services and infrastructure.

As already noted, state general obligation bonds are a less efficient and less equitable way to provide funding for water infrastructure compared to the tax options discussed above. Still, they remain an available tool which Michigan has used in the past to generate funds for water infrastructure, and should be considered as another component to help address Michigan's water infrastructure funding gap. Using state general obligation bonds are still an improvement, from an equity point of view, over reliance on local ratepayers.

The authority for the state to issue bonds comes from the Michigan Constitution which states that the state may "borrow money for specific purposes in amounts as may be provided by acts of the legislature". (170) In order to pass, these acts of the legislature must be adopted by two-thirds of the members in each house during a vote. (171) Then, the issuance must be approved by a majority of electors in a general election. (172) The question submitted to the electors must state the amount to be borrowed, the specific purpose to which the funds will be devoted, and the method of repayment. (173)

Since 1968, Michigan voters overwhelmingly have approved water infrastructure bonds in four separate ballot initiatives: \$335 million in state general obligation bonds to fund water pollution and abatement in 1968; \$660 million in state general obligation bonds (\$85 million dedicated to Great Lakes protection and wastewater) in 1988; \$675 million in state general obligation bonds to support the 1998 Clean Michigan Initiative Act; (174) and then again in 2002 with up to \$1 billion for the Great Lakes Water Quality Bond Authorization Act, to be devoted to financing "sewage treatment works projects, stormwater projects, and nonpoint source projects that improve the quality of the waters of the state." (175) Further research is needed to fully access and understand how these bonds have played out in the years following their authorization. What did these revenues pay for, how are the bonds being repaid, what outstanding principal and interest still remains to be paid over what timeframes, and what was the ultimate bill borne by Michigan taxpayers, including interest and other costs associated with the bond? It would be helpful for Michigan voters to fully understand what they are still paying for previous bond authorizations prior to authorizing additional bonds, and weighing the option of additional bond issuances for water infrastructure against the tax options suggested above.

References:

170) MI. CONST. art. IX, § 15.

171) Id.

172) Id.

173) Id.

174) CLEAN MICHIGAN INITIATIVE ACT, Act 284 of 1998; MICH. COMP. LAWS § 324.95101 (1988)

[https://www.legislature.mi.gov/\(S\(ddd2d3hrukv1k551beyvc55\)\)/documents/mcl/pdf/mcl-Act-284-of-1998.pdf](https://www.legislature.mi.gov/(S(ddd2d3hrukv1k551beyvc55))/documents/mcl/pdf/mcl-Act-284-of-1998.pdf)

175) GREAT LAKES WATER QUALITY BOND AUTHORIZATION ACT, Act 396 of 2002, MICH. COMP. LAWS § 324.95202 (2002)

[http://www.legislature.mi.gov/\(S\(kdpwnm45ronlyq2rkrwnq55\)\)/documents/mcl/pdf/mcl-Act-396-of-2002.pdf](http://www.legislature.mi.gov/(S(kdpwnm45ronlyq2rkrwnq55))/documents/mcl/pdf/mcl-Act-396-of-2002.pdf)

EQUITY BENEFITS OF GENERATING MORE STATE REVENUES TO FUND WATER INFRASTRUCTURE

All of the options described above would bring in substantial new funding for water infrastructure at the state level. In particular, a GIT or millionaire surtax would redistribute a larger share of the burden of paying for water infrastructure from low-income ratepayers to relatively affluent taxpayers. The millionaire surtax option, because it would be earmarked for water infrastructure, would ensure a more reliable source of substantial funding for water infrastructure, thus safeguarding against the need to wage legislative battles each year for sufficient allocations from the state general fund.

The ability to rely on more substantial and reliable revenues generated at the state level would allow utilities to use infrastructure funds more systematically and efficiently. Under the status quo, many utilities attend to infrastructure in a piecemeal fashion. More substantial and reliable state revenues would enable water utilities to plan and develop more sustainable, efficient, and resilient water infrastructure systems for the 21st century.

Issuing state general obligation bonds for water infrastructure and services would redistribute the burden of paying for water infrastructure to a lesser extent, particularly if the current flat tax rate is retained. Moreover, if state bonds are used to capitalize the Clean Water State Revolving Fund (CWSRF) and the interest on state bonds is in fact repaid by ratepayers in economically distressed communities reliant on the CWSRF loans rather than statewide taxpayers, (176) This could result in a negative economic impact at the macro-level, from the standpoint of low-income ratepayers.

Conventionally, it is argued that financing infrastructure through bonds accords with intergenerational equity because the bond is repaid by those who benefit from the use of the infrastructure over the entire course of the useful life of the infrastructure installed. It is important to keep in mind, however, the environmental injustice legacies that have been borne by communities of color and other disadvantaged communities for years. More generally, the manner in which Michigan -- and the United States generally -- has financed water infrastructure in the past and how we fund and finance it today clearly reveals a pattern that has disproportionately benefited whiter and more affluent communities, as illustrated by the analysis of water infrastructure expansion and funding provided in Section III of this report, and the sources cited therein. (177)

References:

- 176)** 40 C.F.R. § 35.3550(g). FLOW (2020). Recommended Reforms to Michigan's Clean Water and Drinking Water State Revolving Funds to Achieve More Equitable Outcomes, Appended as Appendix 5A.
- 177)** See We the People of Detroit (2016). Mapping the Water Crisis* The Disarming of African-American Neighborhoods in Detroit: Volume One. Retrieved from: <https://www.wethepeopleofdetroit.com/community-research/>; Wilkinson, Mike and Kurth, Joel (May 2, 2017), Interactive Map: Detroit water shutoffs by neighborhood, Bridge Magazine, Retrieved from: <https://www.bridgemi.com/detroit/interactive-map-detroit-water-shutoffs-neighborhood>
- Also, see this helpful summary of water and sewerage system development in the U.S. -- mostly private and locally funded (e.g., Detroit taxpayers), and the federal share of water utility capital spending since 1956. <https://www2.deloitte.com/us/en/insights/economy/issues-by-the-numbers/us-aging-water-infrastructure-investment-opportunities.html>

(3) INCREASE FEDERAL FUNDING FOR WATER INFRASTRUCTURE

In addition to generating more state revenues it is also essential to increase federal funding for water infrastructure and at a minimum bring it back to prior historic levels. There are efforts underway at the national level to ensure that federal funding for water infrastructure is substantially increased as part of any infrastructure-focused economic stimulus package to aid the nation's recovery from the pandemic-induced downturn. Those proposals largely entail Congress channeling the additional federal funding for water infrastructure through the Clean Water and Drinking Water SRFs. New federal programs for water infrastructure should also be created that more easily allow the direct distribution of funding in the form of grants, particularly to low-income communities.

EQUITY BENEFITS OF GENERATING MORE STATE REVENUES TO FUND WATER INFRASTRUCTURE

Increased federal funding for water infrastructure would have substantial equity benefits at the macro level, because it would redistribute financial burdens from local ratepayers to federal taxpayers. The fact that most federal funding is expected to be channeled through the Clean Water and Drinking Water SRFs underscores the importance of WFAM recommendations for Michigan's SRFs, so that the equity aims of those recommendations are realized for any increased federal funding made available to Michigan communities through the SRFs.





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(4) REFORM MICHIGAN'S STATE REVOLVING FUNDS

The Clean Water Act (CWA) and the Safe Drinking Water Act authorize the Clean Water State Revolving Fund (CWSRF) and the Drinking water Revolving Loan Fund (DWSRF) respectively, and Congress allocates SRF funding to states to capitalize the state funds. (178) States administer these funds to local governments and water utilities that propose appropriate projects. (179)

Federal law governing the SRFs requires that a portion of these funds be allocated to communities experiencing economic hardship in relation to paying for needed water infrastructure repairs and improvements. (180) Michigan has adopted statutes defining “disadvantaged communities” for the purpose of prioritizing projects for SRF financing. (181) EGLE has also used the same definition of “disadvantaged communities” to allocate additional subsidization in the form of principal forgiveness. (182) However, Michigan’s statute that governs the SRF has not been updated in decades and many of the provisions should be reformed to reflect current needs and fix flaws in the funding distribution. For example, the definition of disadvantaged communities allows for some more affluent communities in Michigan to receive additional subsidies or more favorable loan terms that are usually only options for areas experiencing economic hardship. (183) The definition of disadvantaged communities should therefore be updated and narrowed to ensure that funding and more favorable loan terms are directed at truly vulnerable communities.

In addition to considering how Michigan defines “disadvantaged communities” for the purpose of prioritizing and allocating SRF funds, the WFAM project has identified questions about the interface between state bonds and SRFs; whether the State could do more to benefit vulnerable communities by offering discounted or zero interest rates on SRF loans; and the lack of sufficient standards, transparency, reporting, public participation, and accountability provisions. Many of these changes could be made at the discretion of the department and the administration rather than requiring legislative action. In addition, Congress can ensure participation, reporting, transparency, and accountability through conditions imposed as part of its SRF grant programs.

Finally, the Clean Water Act includes provisions allowing for additional subsidization to be provided from SRFs for projects that include specified green components including addressing water-efficiency and/or energy-efficiency goals, mitigating stormwater runoff, or encouraging sustainable project planning, design, and construction. (184) Michigan could build on this by providing additional subsidization for such projects, as allowed by the CWA. Beyond this, Michigan could also provide points within its state prioritization criteria to favor projects with these and additional green infrastructure components.

MORE →

In sum, this report recommends that Michigan's Clean Water and Drinking Water SRFs should direct more funding and favorable loan terms towards communities experiencing the most significant hardship. Specifically, Michigan should:

- Revise the definition of disadvantaged community;
- Revise the criteria and point system used to prioritize projects eligible for SRF assistance to ensure projects in disadvantaged communities are prioritized;
- Award prioritization points to projects submitted by water utilities that have adopted affordable rates structures and other affordability programs for low-income customers;
- Strengthen incentives for projects to contain green infrastructure components;
- Consider offering varying interest rates and zero interest rates to public water suppliers that serve disadvantaged communities;
- Revise the criteria used to allocate additional subsidization, such as principal forgiveness, to ensure that assistance goes only to communities facing significant hardship (with the exception of requirements in the Clean Water SRF that provide subsidization for green projects);
- Use state general revenues, rather than bonds repaid through interest earned by SRFs, for the 20% match required for federal SRF capitalization grants; and
- Clarify and strengthen water operator and EGLE public notice, participation, opportunity to be heard, standards for determinations and decisions, public data access, and rights of enforcement and judicial review for residents and communities affected by local and State decisions.



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EQUITY BENEFITS OF REFORMING MICHIGAN'S STATE REVOLVING FUNDS

The Clean Water and Drinking Water SRFs provide a framework for channelling federal funding for water infrastructure to communities in Michigan. Using federal funding for water infrastructure addresses the right to access water and water affordability at the macro level because it shifts the burden of paying for water infrastructure from local ratepayers to federal taxpayers. This burden shifting is true, to some extent, even in the case of SRF loans repaid by local ratepayers, to the extent that SRF loans are easier for communities to access and provide lower interest rates and other advantages over municipal revenue bonds. However, the macro-level burden-shifting effect is much more significant when SRF assistance is provided in the form of grants or principal forgiveness rather than as loans. Accordingly, recommendations to revise how the state defines “disadvantaged communities” both for the purpose of prioritizing SRF applicants and for the purpose of providing additional subsidization is very important to ensure the most equitable outcomes.

Awarding prioritization points to SRF projects submitted by water utilities that have adopted affordable rate structures and affordability programs for low-income customers would provide an incentive to water utilities to adopt affordable rate structures in order to increase the likelihood of receiving SRF assistance.

When considering if we should provide points specific to projects that contain green infrastructure components taking equity into account necessarily means considering the offsetting impact; to the extent that prioritization points are awarded for one factor, this effectively decreases the weight accorded to other priority factors. Thus, enhancing the prioritization of green projects could lessen the priority otherwise accorded to disadvantaged communities. Awarding prioritization points to projects containing green components and located within disadvantaged communities would reconcile this conflict and increase the environmental assets, and related environmental health benefits, enjoyed by disadvantaged communities. As for green components, triple bottom line benefits could be incorporated into Michigan’s prioritization criteria or otherwise required for all SRF projects.

References:

- 178) 33 U.S.C.A. §§ 1381-1387; 42 U.S.C.A. § 300j-12. Also, see generally FLOW (2020). Recommended Reforms to Michigan’s Clean Water and Drinking Water State Revolving Funds to Achieve More Equitable Outcomes, Appended as Appendix 5A.
- 179) 33 U.S.C.A. § 1383(c); 42 U.S.C.A. § 300j-12(a)(2); See also FLOW (2020). Recommended Reforms to Michigan’s Clean Water and Drinking Water State Revolving Funds to Achieve More Equitable Outcomes, Appended as Appendix 5A, at pp. 3-5.
- 180) 42 U.S.C.A. §§ 300j-12(b)(3)(A); 33 U.S.C.A. §§ 1296, 1383(g), 1386(c); See also FLOW (2020). Recommended Reforms to Michigan’s Clean Water and Drinking Water State Revolving Funds to Achieve More Equitable Outcomes, Appended as Appendix 5A at pp. 8-12.
- 181) Mich. Comp. Laws § § 323.5403(5)(c)(v), 324.5301(c); 324.5406, 324.5407; See also FLOW (2020). Recommended Reforms to Michigan’s Clean Water and Drinking Water State Revolving Funds to Achieve More Equitable Outcomes, Appended as Appendix 5A at pp. 8-12.
- 182) Michigan Department of Environment, Great Lakes and Energy, Drinking Water State Revolving Fund Intended Use Plan - Fiscal Year 2020, at 2 (2019), Retrieved from: https://www.michigan.gov/documents/egle/egle-fd-wifs-DWSRF-DWIuppp12020-Final_670368_7.pdf; Michigan Department of Environment, Great Lakes and Energy, Drinking Water State Revolving Fund Draft Intended Use Plan - Fiscal Year 2021, at 2 (2020), Retrieved from: https://www.michigan.gov/documents/egle/egle-fd-wifs-DraftDWSRFIUP21_699368_7.pdf; See also FLOW (2020). Recommended Reforms to Michigan’s Clean Water and Drinking Water State Revolving Funds to Achieve More Equitable Outcomes, Appended as Appendix 5A.
- 183) Email from Robert Schneider with EGLE, (Mar. 18, 2020). “This criteria More than 50 percent of the geographic area to be served by a proposed project is identified as a poverty area by the U.S. Bureau of the Census. Current poverty areas within Michigan are identified in Appendix B on the Census website. Talks of 50% but it is referring to a geographic area or census tract. Instead we have gone to 20% of the community on advice from our state demographer since this 20% could be more equitably applied across the state.” Conversations with EGLE 8/5/2020.
- 184) 33 USC 1383(i)(1)(B).



(5) IMPROVE TRANSPARENCY, PUBLIC PARTICIPATION, AND ACCOUNTABILITY IN THE GOVERNANCE OF COMMUNITY DRINKING WATER, WASTEWATER, AND STORMWATER SERVICES, AND RELATED INFRASTRUCTURE INVESTMENTS

As noted by the US Water Alliance in their national briefing paper, *An Equitable Water Future*, “The ecosystem of water governance is complex: multiple agencies hold responsibilities over different issues, the subject matter is highly technical, and decision-making processes can have long time horizons.” (185) These factors, along with language barriers, limited transparency and systematic public provision of and access to key documents and decision-making processes, as well as a lack of technical support to ensure vulnerable communities know about, understand, and are able to provide meaningful input and response to key determinations and decisions makes meaningful public participation in decision making that governs water rates and water infrastructure investment decisions difficult.

Delving into questions about funding and financing options for water infrastructure, including the programs and procedures governing existing funding and financing mechanisms and their implementation as well as the affordability of residential water rates and how rates are set, has underscored to WFAM partners the general lack of sufficient transparency, public participation, accountability, standards, and oversight in relation to the SRFs and funding/financing frameworks and decision making.

These issues need to be scrutinized more closely in coming months in relation to Michigan’s administration of its SRF funds and bond issuances as well as local municipalities’ setting of water rates and state oversight of water rates. State oversight of water rates could include, for example, reauthorizing the Michigan Public Service Commission to oversee water rates. These kinds of issues must also be attended to in relation to the development of laws and procedures to govern the new, innovative funding and financing measures recommended in this report.

Existing legal requirements and standards for transparency, decision making, public participation, accountability and oversight need to be clarified and communicated to affected communities. Where public officials fail to adhere to these requirements and standards, they must be held to account. Where these existing legal requirements and standards are unclear or deficient, new measures should be developed and adopted. WFAM partners intend to continue working on these issues to clarify, enforce and, where necessary advocate for the amendment of legal requirements and standards to ensure adequate transparency, public participation, and accountability in water governance.

MORE →

EQUITY BENEFITS OF IMPROVING TRANSPARENCY, PUBLIC PARTICIPATION, AND ACCOUNTABILITY

Improving the transparency, public participation, and accountability in the governance of Michigan's water systems could have a number of benefits for the communities and residents these systems serve, ranging from better-informed policies more responsive to community needs, more equitable rate structures and more equitable allocation of water infrastructure investments as well as improved customer service (e.g., expanded customer outreach that is better tailored to the needs of different communities; demonstrable concern for economic hardship of low-income customers without blame or prejudice; improved mediation of billing disputes with assistance of a community advocate or ombudsman).

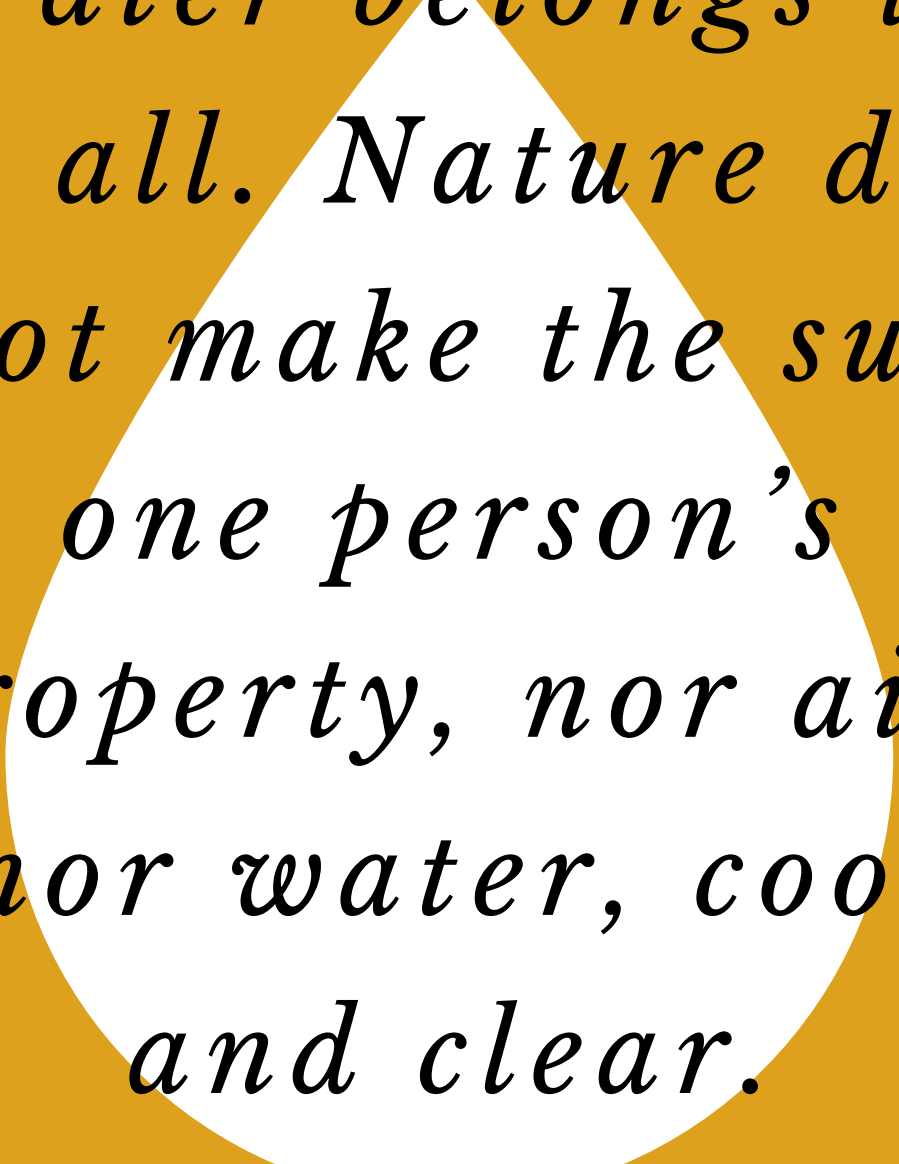
In addition to delivering more equitable and community-oriented outcomes for vulnerable communities, improved transparency, public participation, and accountability can also lead to improved understanding and trust between customers and the water utilities that serve them and, in turn, improve public support for water utilities and their operations.

References:

- 185) U.S. Water Alliance (2017). An Equitable Water Future: A National Briefing Paper, Retrieved from: http://uswateralliance.org/sites/uswateralliance.org/files/publications/uswa_waterequity_FINAL.pdf

PHOTO PROVIDED BY VALERIE JEAN





*Water belongs to
us all. Nature did
not make the sun
one person's
property, nor air,
nor water, cool
and clear.*

Michael Simpson

VI. PUBLIC OPINION RESEARCH AND STAKEHOLDER ENGAGEMENT

To better understand how the analytical insights and policy recommendations put forward in this report resonate with the wider group of stakeholders working on water equity, water security, water affordability, and water infrastructure funding/financing, the WFAM project formed an Advisory Committee of frontline advocates who have been working on one or more of these issues for many years. Members of this Advisory Committee are listed in Appendix 2A. In addition, the project commissioned public opinion research to test perceptions of policy recommendations and related underlying values around water and equity.

A) THE URGENCY OF WATER INSECURITY

Through statewide public polling, the project sought to test several areas of opinion and experience, including policy proposals, perceptions of Michigan's drinking water, hardship issues, and underlying values about water to determine which funding/financing options best reflect public demand. Partners first compiled and assessed existing polling information on water infrastructure funding and financing to identify information gaps. Project partner MEC convened a "Talking Water Summit" in June 2020 to highlight public opinion research on water and consider different messaging frames. Drinking water affordability was one of the three issues on which the Summit focused. In addition, WFAM partners, led by People's Water Board Coalition, undertook a literature review to better understand what it means to focus on equitable public opinion research and identified best practices. The goal was to ensure that the procured public opinion research adequately included and reflected the experiences and views of Michiganders who had experienced, or were more at risk of, water insecurity. To ensure the inclusion of demographic segments of Michigan's population that might be under-represented in typical polling samples, the scope of work was formulated to include "over samples" of low-income Black adults and low-income rural adults ensuring adequate voice and attitudes of traditionally under-represented groups in polls.

After determining that project funds were only sufficient to pay for either a public opinion survey *or* focus groups, WFAM partners decided to conduct a survey first with a polling organization that demonstrated its experience and understanding of our objectives. The decision was taken to contract with the public opinion research firm Lake Research Partners (LRP).

Project partners worked closely with LRP to craft the survey. It included questions on respondents' values and perceptions around the quality and safety of water in Michigan and water insecurity experienced by respondents. In addition, it asked questions regarding emerging project recommendations and related values. LRP conducted the survey from August 24 - September 7, 2020. A total of 932 Michigan residents were interviewed, including over-samples of 159 low-income rural adults and 169 low-income Black adults. Survey respondents were distributed across the state: 17% Wayne County; 29% outer metro Detroit; 21% Central Michigan; 27% Western Michigan; 6% Northern Michigan. Of the low-income Black adults surveyed, 71% lived in Wayne County. Of the low-income rural adults surveyed, 63% lived in Western Michigan. The margin of error for the total sample is +/- 4.0% giving us a confidence level of approximately 95% with our sample size.

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The survey results indicate strong agreement with values driving the WFAM project, across all self-identified political groups. Respondents were offered a number of value statements relating to water. Those that garnered the strongest agreement were:

- The natural waters in Michigan belong to all of us and should be protected by the state for the benefit of all the people who live here, today and in the future. (78% strongly agree).
 - Democrats 94%; Independents 62%; Republicans 74%
- The state of Michigan should ensure that everyone has access to safe, clean, affordable drinking water, whether they are white, Black, or brown. (78% strongly agree).
 - Democrats 86%; Independents 77%; Republicans 75%
- Corporations that pollute and contaminate drinking water should be responsible for cleaning up and restoring those resources so that the water can be safe for people to drink (78% strongly agree).
 - Democrats 89%; Independents 69%; Republicans 71%

In relation to perceptions of drinking water, the survey revealed the following:

- 62% said that drinking water in their area is extremely or very safe. However, only 46% of Black residents shared this assessment.
- Nearly one third said that the safety of Michigan's drinking water has gotten worse, and 38% say it has not changed; 19% say it's gotten better.
- Overall, a 54% majority say the government is doing just a fair or poor job of ensuring clean water.

Twenty-two percent of adults represented by the survey stated that they have switched to bottled water due to concerns about the safety of drinking water where they live. Including this concern, over one third of Michigan adults have experienced a water hardship. Other hardships include having to cut back on food, rent, or other essential items in order to pay for a water-related bill or loan (9%) or having to use SNAP benefits to buy bottled water (7%). Five percent of adults in the survey have skipped a water bill payment or sought social service payment assistance for water bills. Low-income adults, particularly low-income Black adults, mothers, and people in Wayne County are more likely to have experienced two or more hardships.

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When told about the Public Water Justice legislative framework recommended by WFAM, the survey indicated overwhelming support for the legislative proposal and the public trust and equity values it encompasses.

- Overall, 71% of Michiganders favor the Public Water Justice proposal, including 58% who strongly favor it.
 - Both low-income rural adults and low-income Black adults indicated even stronger support, with 70% of low-income rural adults and 72% of low-income Black adults stating that they strongly favor the proposal.
 - Support for the proposal cut across all self-identified political groups: Democrats 85%, Independents 64%; Republicans 62%.
- Overall, respondents were most likely to say that “clarify and ensure the public owns our water supplies for public use instead of private owners for profit” is the most important goal.
- However, for both low-income Black and low-income rural adults, “ensure that a portion of the profits from selling water bottled in Michigan benefit everyone in Michigan by funding water infrastructure, particularly in communities struggling to make ends meet” is the most important goal.

In relation to specific ways to generate additional state revenues for water infrastructure

- 61% support a graduated income tax, including 44% who strongly support.
- 57% support a millionaires’ surtax, including 41% who strongly support.

In relation to how funding should be allocated, a strong 58% agree with an equitable approach preferring that most of the funding go to communities with the greatest need for infrastructure repairs.

Finally, LRP’s work in the Race Class Narrative (RCN) project provided another layer of cross-sectional data and analysis for this polling work. Through a set of different questions to engage respondents on race, class and democracy, they have been able to build empirically validated, field-tested narratives that have been adopted by several progressive advocates, including Michigan-based groups.

Additional public opinion research is needed to further probe and more clearly understand these findings. The use of focus groups and a subsequent survey would help achieve this goal.



B) ADVISORY COMMITTEE FEEDBACK

In late 2019, WFAM partners identified individuals for inclusion on the Advisory Committee. The committee is composed of grassroots activists, impacted community members, labor leaders and environmental justice allies. Most committee members reside or work in communities across the state that are impacted by inequitable water access, unaffordable water, contaminated water and/or water infrastructure issues. Most members are engaged on issues that are pertinent to this project including water access and affordability, infrastructure and labor issues, tax policy, and social justice. WFAM partners held an introductory meeting in early February 2020 and had planned for a series of in-person meetings, but with the COVID-19 pandemic we opted to instead do individual interviews virtually over the course of the spring and summer. In August and September, we convened two virtual meetings with the larger group to share key recommendations, polling insights, and research, and to garner input and feedback. This process was extremely helpful to inform WFAM partners and groundtruth the project outcomes.

Key recommendations from our advisors included the need for further engagement with impacted community members, the need to build a broad consensus around our recommendations, and the need to continue engaging with various tables and coalitions whose interests align. Generally, our policy recommendations received positive feedback, with the most popular options being the legal framework for public water justice and the graduated income tax. Our advisors generally preferred funding options over financing options and discussed some concerns around the inequitable nature of bonds. If bonds are a part of the solution, most advisors thought it would be best to approach bonds in tandem with funding mechanisms to ensure that the bonds can be repaid without creating significant impacts to future state or municipal budgets.

Most advisory committee members have a shared deep interest in continuing to support efforts by WFAM to move key recommendations forward. Though the advisory committee has shared opinions on our recommendations, their participation in this process should not be seen as an endorsement of WFAM's recommendations.



A large, solid blue water drop shape is centered on the page. The drop is teardrop-shaped, with a pointed top and a rounded bottom. The text "Water is life" is centered within the drop.

Water is life

VII. CONCLUSION AND NEXT STEPS

This report presents key findings and recommendations emerging from the Water for All of Michigan (WFAM) project on equitable funding and financing solutions to meet Michigan's water infrastructure needs. These findings and recommendations follow from key insights developed through the project:

- The story of water insecurity in Michigan reflects broader patterns of racial and socioeconomic inequity that must be recognized and remedied;
- The problems of water inequity, water affordability, and water insecurity are intrinsically connected to problems of water infrastructure funding and financing in Michigan;
- Public water systems must be viewed foremost as a public good and service that assures safe, clean, and affordable water to all residents;
- Public trust principles provide a framework to reorient our understanding of human-built water systems, and how we should pay for them, by recoupling water infrastructure and equity;
- Public water systems must become financially, structurally, and operationally resilient, reliable, and sustainable;
- Current over-reliance on residential ratepayers to bear the burden of paying for water infrastructure is fundamentally inequitable and unsustainable;
- Financing and funding public water must shift from primary reliance on overburdened residential ratepayers to an integrated approach that includes sources of revenues that are more equitable and reliable, to address the paramount concern for water and health as the foundation for stable communities and a prosperous economy; and
- Given the seriousness of recent crises surrounding public water and health, the state of Michigan, its local public water utilities, and its residents should act with urgency to adopt the recommendations outlined in this report.

Immediate next steps to move this agenda forward include the need to build upon the research and analysis developed through the WFAM project to address outstanding questions and further expand knowledge. Among other things, immediate research needs include: (1) the identification, quantification, and prioritization of water affordability programs and emergency needs that could be assisted by the proposed public water justice trust fund, and (2) further public opinion research to validate and develop the insights into public values, opinions, and priorities described in Section VI of this report.

Another essential next step for moving forward the recommendations outlined in this report is to engage and educate other organizations working on water, equity, and water infrastructure funding and financing issues in Michigan as well as state and local officials, lawmakers, and the general public to reframe understanding of public water systems and how they should be paid for. Drinking water, wastewater, and stormwater utilities exist to provide water services to the people, to fulfill the public trust in water by

by making water available for the needs of Michiganders in our 21st century context -- in other words, a modern-day iteration of the state's classic, public trust duty to safely steward Michigan waters for the benefit of all the people of Michigan, for their sustenance, health, and livelihoods. A shared understanding of and commitment to this vision of how our human-built water services fulfill the public trust in water are an important first step to lay the groundwork for the adoption of the recommendations expounded in this report.

Michigan's water insecurity and water infrastructure problems are connected, complex, and urgent. Michiganders strongly value public ownership of Michigan's freshwater endowment and believe the state of Michigan should ensure that everyone has access to safe, clean, affordable drinking water, whether they are white, Black, or brown. There is overwhelming support for these values within every political group. In this time of deeply divided politics in the country and in Michigan, we need to adopt a new paradigm for how we understand, value, and pay for our drinking water, wastewater, and stormwater management systems. Adopting a new paradigm that affirms and secures these widely shared values provides a compelling opportunity to unite the people of Michigan across political divides to protect Michigan water, rebuild the state's water infrastructure, and ensure access to safe, clean, and affordable water for all in Michigan.

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