

**FRESHWATER**<sup>™</sup>

#### 2020 SERIES, ISSUE THREE

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# What is Affordability and How Does it Relate to Water Infrastructure and Contamination?



### Director's Note

Jill M. Ryan Executive Director

ambridge English
Dictionary defines
affordability as: *the*

state of being cheap enough for people to be able to buy. When we talk about the affordability of water, we have to start with the question, who is the customer, in order to determine what amount would be affordable for a customer to be able to buy water. The United Nations for example, provides that the cost of providing water should not exceed 3% of household income, and the combined provision of water and sewer costs should not exceed 5% of household income if they are to be considered affordable.

Unfortunately, rather than approaching affordability from the perspective of customers, we often learn that water is becoming or has become unaffordable only when people lose access to water because they couldn't pay their water bill. In other words, we set water rates based on the need to meet expenses of our water utilities, rather than considering why water provision costs are rising and causing water to become unaffordable and addressing that problem head on.

Two of the big reasons for rising water costs at utilities are: aging water infrastructure that has been largely ignored for more than a century causing a century-old bill to come due for past unmet maintenance needs and increasing costs of treating water to remove contaminants such as lead, PFAS, bacteria, etc. Due to increased knowledge of the health impacts of emerging contaminants such as PFAS and lead, these two costs are being realized across the country at the same time and we must find solu tions that allow us to focus on providing clean and safe water at affordable rates rather than continuing to pretend we can just increase rates for customers beyond their ability to pay.

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As a recent report from Michigan State University by Dr. Elizabeth Mack, and others, explains, if water rates continue to increase at expected rates, in five years nearly 36% of U.S. households will no longer be able to afford water. To solve this problem we cannot simply continue to raise rates and plow all of that money back into century-old solutions to our water provision and waste water treatment systems.

Rather, innovation and creativity are needed NOW! We must seize on new technologies and new ideas to build back our water systems in more sustainable ways than ever before. Technologies such as turbines in water pipes are already being implemented; ideas such as developing natural solutions not just to stormwater, but also for treating wastewater and capturing energy in the process must be pursued as tools to reduce costs and improve our infrastructure, not simply replace it.

Freshwater Future believes water is a basic human right and that we must find ways to help everyone be able to pay an affordable water bill and create ways to modernize our infrastructure and the resultant costs. The Great Lakes hold 20% of the Earth's fresh surface water, and we are considered the wealthiest country in the world, yet an estimated 1,000,000 in our region do not have reliable access to running water. The U.S. also has the biggest wealth gap, and the gap in water affordability is a troubling part of that wealth gap.

Join us today to ensure clean, safe and affordable water for all by signing-on to the platform on page two and available on freshwaterfuture.org under Affordable Water.



Freshwater Voices is a joint production of Freshwater Future, a 501 (c) (3) non-profit organization and Freshwater Future Canada, a registered Canadian charity.

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Freshwater Voices is intended to provide a forum for the free exchange of ideas among citizens and organizations working to protect aquatic habitats in the Great Lakes Basin. The interpretations and conclusions presented in this newsletter represent the opinions of the individual authors. They in no way represent the views of Freshwater Future, funders, members, donors, Freshwater Future Canada or any organization mentioned in this publication.



### Take a Stance: Water Affordability Platform

**F** reshwater Future and All About Water, along with our partners throughout the Great Lakes region and across the country, launched a campaign urging all 2020 candidates for local, state, and federal offices take a position on making sure every family has access to safe, clean, and affordable drinking water. Nearly 70 organizations have signed on to the pledge.

- Water affordability must acknowledge that water is a public trust, the provision of water is a public good and water is not a commodity subject to privatization.
- Water affordability must be situated within a broader commitment to ensuring access to clean, safe, affordable water for all.
- Water affordability must be modeled along the lines of a sliding- scale, income-based rate system, such as that devised in Roger Colton's 2005 Water Affordability plan prepared for the City of Detroit.
- Water affordability must be centered within a framework of preserving and maintaining public health.
- Water affordability must maintain a commitment to principles of conservation and providing assistance to low income residents to ensure they can be proper stewards of their water resources.
- Water affordability must enshrine quality customer service as a central value along with a commitment to acknowledge the human dignity of all the people it serves.

Now that the election is over, we will continue to reach out to elected officials from- mayor to president- to make clean, safe, and affordable water a top priority. You can help us to continue to educate your community's leaders. Visit our website for a copy of the Water Affordability Platform, ask your officials to sign it and return to us.

- Water affordability must find appropriate ways to deal with past consumer debt, such as the policies being implemented in Philadelphia.
- Water affordability must eschew water shutoffs as a policy for being inconsistent with the values of public health and the commitment to acknowledge the human dignity of all the people it serves.
- Water assistance plans are not the same as water affordability plans and must not be advertised as such.
- Tiered water pricing plans, where water is priced by volume, are not the same as water affordability plans and must not be advertised as such.
- To ensure community justice in this water affordability platform, provide training, employment, contracting and other economic opportunities for infrastructure design, construction, operations, and management to low- and very low-income persons, especially recipients of government assistance for housing, and to businesses that provide economic opportunities to low- and very low-income persons.

\*\*This is drawn from the Ten-Points copyrighted by the Michigan Water Unity Table (November 14, 2018)

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### Why Lead Adds Cost to Our Water Bill

ead service lines (LSL) that connect water mains to residents' homes are known to increase the lead content in our drinking water as pipes and fixtures corrode. In 1986, new LSL's were banned from being installed, though existing lines were allowed to remain. Instead of completely removing lead pipes, alternative strategies were implemented including lining pipes with a corrosion control solution to reduce the amount of lead leaching into the water and making municipal water less corrosive by reducing acidic levels and mineral content.

The federal government regulates the amount of lead allowed in drinking water and periodically samples homes with lead lines to ensure that this corrosion control is working effectively. However, the ultimate goal is a complete replacement of lead lines in our water systems, especially now that these lines are aging.

Besides the water treatment costs for public water systems that are passed on to customers, residents may need additional expensive leadremoving water filters at faucets when lead is still a problem. In addition, removing the estimated six to ten million lead pipes as we modernize our country's infrastructure will cost a great deal of money. Federal funding, tools and technology do exist, however, to help reduce the costs of modernizing our water systems, such as the one outlined below.

#### Using Artificial Intelligence to Find Lead Pipes

Used during the Flint water crisis, artificial intelligence helps efficiently pinpoint where lead pipes are located in municipal water systems. Freshwater Future is currently involved in a partnership with the City of Toledo and Blue Conduit to utilize this technology and test how well it can identify pipes, allowing significant cost savings in replacing lead service lines. Freshwater Future's role will be public education and outreach about the dangers of lead and how families can protect themselves until lead line removal is complete.

### No Lead is Safe

The U.S. Environmental Protection Agency has set the health goal for lead in drinking water at zero because of the harmful impacts to health from exposure to this toxic metal at low levels. Lead exposure can build up or bioaccumulate in the body over time.

Based on this guidance that there is no safe level of lead in drinking water, Freshwater Future recommends that all homes in communities that are not in compliance with the Lead and Copper Rule use filters and water flushing techniques.

It is important for everyone residing in cities with elevated lead levels to understand the importance of using filters and have a knowledge of their proper maintenance and use. For more details on filters and flushing best practices visit https://freshwaterfuture.org/ community-resources.



Available as PDF download on our website.



# Is Your Municipal Drinking Water Safe?

The safety of your municipal drinking water and actions you can take to reduce exposure to lead in drinking water. Based on the recently published Michigan Lead and Copper Rule Handbook from the Great Lakes Environmental Law Center, Session 1 provides an overview of the law and how to



check the status of your community's water quality. Session 2 offers practical solutions to protect public health and advocate for long term solutions including lead pipe replacements.

Although the handbook has a Michigan focus, the information is still informative for any community with a public water supply in the Great Lakes region.

PHOTO: MARKUS DISTELRATH | PIXABAY



### PFAS Contamination—The Cost to Local Communities and Public Health

Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are man-made chemicals and one of the biggest toxic environmental threats facing the Great Lakes region and are being discovered in locations across the country, which is why more testing is urgently needed. However, places where PFAS chemicals are used in large amounts such as airports, military bases, and certain industries, like plating, are at high risk for contamination.

Where elevated PFAS levels have been found, in addition to health impacts, the economic impact is real. For example, communities that have to provide alternate safe water supplies or new treatment, local property values and businesses can be negatively impacted, while the stress and worry of public health linger. The things that make PFAS desirable in products also make it difficult and expensive to remove from water or clean up in the environment. In rural areas, homeowners on wells may have to be connected to a new or expanded public water system, which costs both the municipality for the expansion and the homeowner who already invested in a well and now has to also pay for monthly water bills. In areas with public water service that has been contaminated by PFAS, the cost of providing water increases because the water system has to install new and expensive technologies to remove the contaminants.

Although the State of Michigan has found more contamination sites than other states, that is because it decided to test for PFAS earlier. Additional states in the region such as Illinois and Ohio are now starting to expand testing, and this will no doubt add to the map of contaminated sites and unfortunately, contaminated water. This contaminant is so widespread that the costs to treat it will continue to impact the affordability of our



drinking water. Therefore we must act now to understand where it exists, continue to explore new treatment technologies, and demand additional regulation of these and other potentially harmful chemicals.

# **PFAS Issues Around the Great Lakes—Oscoda Update**



n 2010, PFAS pollution was detected at the former Wurtsmith Air Force Base in Oscoda, MI, and it was determined that residential drinking water wells had been impacted by the pollution. Since that time, the Michigan Department of Health and Human Services and the local district health department have been providing impacted homes with alternative water supplies such as reverse osmosis filtration systems, in-home drinking water coolers, and bottled water.

Oscoda Township cannot afford to extend municipal water to all potentially impacted homes, but so far has secured U.S. Agriculture Department grants for two of the ten areas in need of municipal water. If the grants remain available, it will take at least another eight years to complete the remaining municipal water line extensions.

While the grants obtained so far have allowed some residents to tap into Oscoda's municipal water lines, many have not done so because they cannot afford the connection fees or the bills for water usage. Anthony Spaniola, of Need Our Water (NOW) in Oscoda, says that the community is working with Michigan's congressional delegation to press for quicker action. "The Air Force has dragged its feet for more than a decade," he said. "The time for action is now."

In addition to the drinking water health concern, the State has issued "Do Not Eat" warnings for non-migratory fish, venison and other wildlife in the Oscoda area, as well as a warning to avoid contact with contaminated foam that plagues area surface water and shorelines, including Lake Huron. The Air Force says that it will install two limited clean up systems in 2022, but claims that it needs at least two more years of investigation before coming up with an overall cleanup plan, which will likely take several more years to implement.



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### Flint Community Lab Celebrates Grand Opening!

n October 9, 2020, the Flint Community Lab celebrated it's virtual grand opening with a ribbon-cutting and presentations from project partners and funders. Thanks to many, the vision for

a trusted lab where residents can have their water tested for free and youth can gain educational opportunities in the sciences and technology is now a reality. We are humbled and honored to have been a part of this project and look forward to many years of partnership.

To take a virtual tour of the facility, just visit Freshwater Future's YouTube channel, Facebook page, or website for video link.



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### Do You Know a Freshwater Hero?

**NOMINATE THEM TODAY!** 

ach year, Freshwater Future recognizes champions across the Great Lakes region who work tirelessly to protect the Great Lakes, whether their corner of the Great Lakes or the entire basin as a whole. Nominate your local Freshwater Hero by providing the following:

- 1. Who you are nominating
- 2. What organization they work with/or community they work in
- 3. What makes them a champion for their community

Email ann@freshwaterfuture.org with your nomination and qualifications by January 15, 2021.



### Women, Water, Wellness

omen, Water, Wellness Webinar Series—2021 monthly online learning series will focus on wellness and organizational management topics that will help you bring positive energy and change to your group. Look for upcoming webinar dates on Freshwater Future's website and our weekly news.

### Give the Gift of Helping to Ensure the Healthy Future of Our Great Lakes Waters!

onsider making a donation in honor of family and friends to Freshwater Future this holiday season. The recipient will receive a greeting card with acknowledgement.

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