FRESHWATER™ FUTURE
Ensuring the Healthy Future of Our Waters

Voices freshwater

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2019 SERIES, ISSUE TWO

What's In This Issue:

Drinking Water Threats—How To Know If Your Water Is Safe

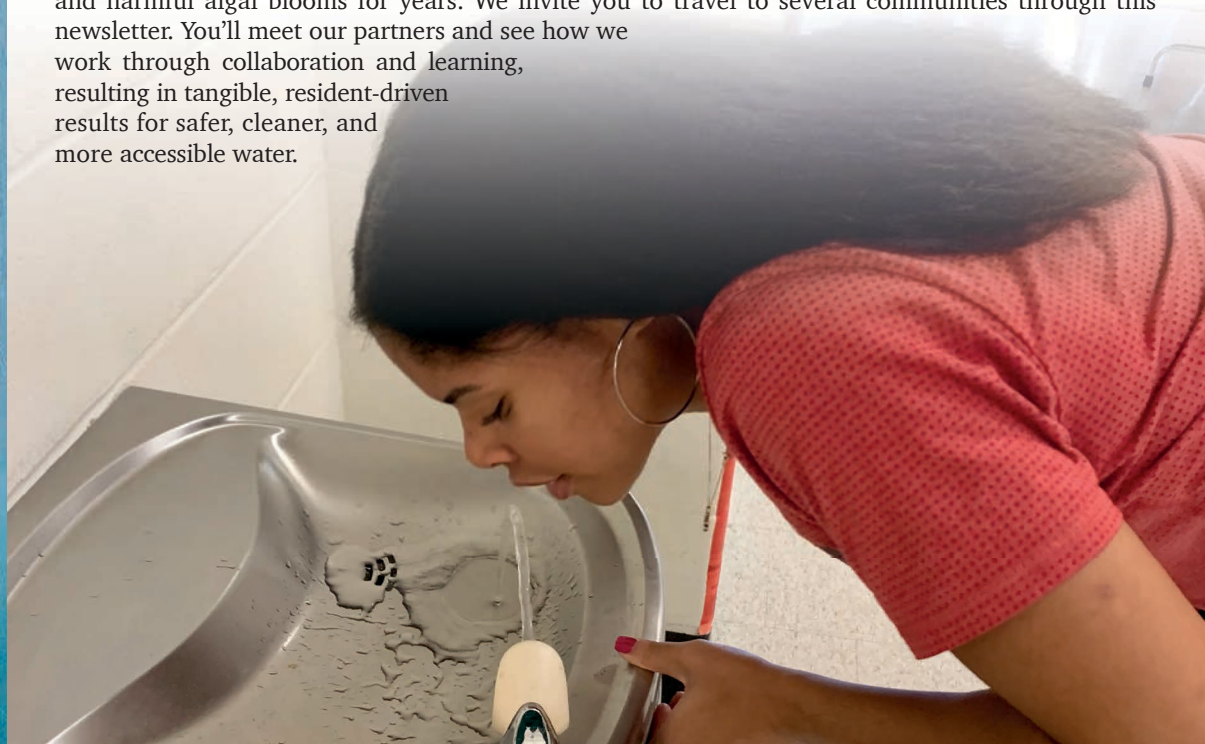
Lead contamination from old pipes, **toxins from chemicals** in the environment and **toxins from harmful algal blooms** are showing up in our drinking water and bottled water. How do you know if your water is safe to drink? You can't taste, smell, or see lead, PFAS or many other chemicals, or toxicity from algae in your water. The only way to know if it is in your water is to test your water.

Most States provide test kits for chemicals such as lead, nitrates, chlorides, and bacteria testing (e-coli) at a relatively low cost. You can visit our website to find out how to get your water tested for lead and PFAS in your state, freshwaterfuture.org/

Freshwater Future is now also offering PFAS home tests. PFAS is a chemical used in non-stick pans, water and stain-repellents and fire fighting foams. Check out page 5 to learn more.

If your water comes from a public supply you can still have your water tested for lead, PFAS, and other substances to know what is coming from your tap. Public supplies are required to publish annual water quality reports called consumer confidence reports and which are often available on the municipalities' websites. These reports provide water quality information about the water before it is distributed through infrastructure (pipes).

Healthy people and communities require access to safe drinking water, that is why Freshwater Future has been working with leaders and communities to address threats such as lead contamination, PFAS and harmful algal blooms for years. We invite you to travel to several communities through this newsletter. You'll meet our partners and see how we work through collaboration and learning, resulting in tangible, resident-driven results for safer, cleaner, and more accessible water.



Did You Know?

Filters Can Remove Pollutants—Must Match the Right Filter to the Pollutant

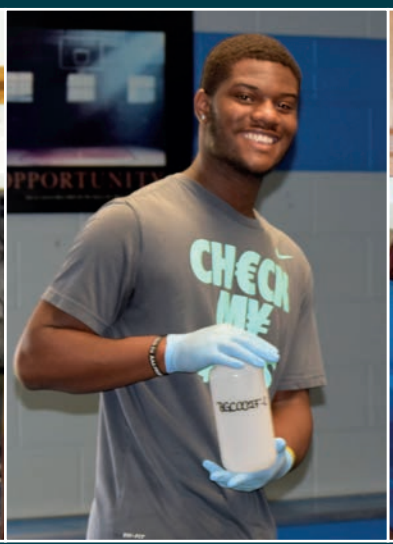
FAS above recommended levels? Don't panic. Fortunately, there are in-home filters that can reduce lead, PFAS and other pollutants. But not all filters are created equal. It is important to match the type of filter to the pollutants you want to remove. For example, the type of filters commonly used to reduce lead that are easily attached to a faucet, are not effective at removing PFAS. The National Sanitation Foundation (NSF) certifies filters and other treatment processes for removing pollutants (a listing can be found on their website, nsf.org).

Feel free to contact us if you have any questions.

Flint Youth Helping To Re

At the height of the Flint Water Crisis, the residents of Flint were assured by officials that their water was safe. Independent testing of residents' drinking water found that not to be true, and was discovered to be highly contaminated, with lead levels exceeding 100 ppb. The longevity of the crisis and the difficulty of living without water have caused trauma to residents, showing that in addition to addressing water quality to protect public health, a crisis of this magnitude also requires finding ways for residents to begin to trust and believe the water is actually clean in order to recover from the trauma.

The lack of trust in the safety of the water and government among Flint residents can't be understated, and must be addressed as Flint residents move forward. Over the last year, Freshwater Future, with the support of the Michigan Humanities Council, hosted "Flint Community Conversations" events, in which residents were able to come together and talk about the current state of water in Flint, their feelings about water, and solutions to help within the community. During these gatherings, the residents expressed never being able to trust the quality of the water again. "The trust is gone, its gone," one resident said. Fueling residents' frustrations was that they didn't feel included at the onset of the crisis. The lack of transparency from elected officials and not being part of the decision making process contributed to the harm experienced by everyone who calls Flint home.



Flint youth tested homes and community centers for lead in 2018, helping provide trusted information to residents. Flint youth were trusted messengers of information about lead and filters, helping residents access information to keep their families safe.

build Trust: Community Lab For Residents

Last summer, Freshwater Future in partnership with the Flint Development Center, Genesee County Hispanic Latino Collaborative, Flint Neighborhoods United, and the University of Michigan Bio-Station, launched a successful summer program with 18 youth who completed over 170 water tests in just six weeks. The community embraced the program. Flint residents were finally being listened to and someone was there to help who they could trust. During our pilot program, we discovered that 30% of homes STILL did not have working water filters and that lead levels were still elevated in some of the homes we sampled, up to 33 parts-per-billion. In addition to learning of the wide-range of lead in homes, it was apparent from the testing results that proper use of the water filters is an effective method to reduce lead levels. Students helped replace cartridges and install filters for those in need.

Transparency and community involvement is key in turning things around for Flint. That's why the Flint Development Center is creating a water quality lab, with Freshwater Future's assistance, that will provide free sampling to Flint residents so that they have accurate information about their individual home's water and can take steps to resolve any problems with their water. The Mackenzie Patrice Croom Community Lab will be run by the Flint Development Center, with much involvement from members of the community. A Community Water Council has been formed with local advocates, youth, and interested residents, and will include other resources and engagement opportunities.

Involving community at every step, not only propelled the success of our youth water testing program, but also created a better flow of information sharing about filter use, sample collection, and test results, to help establish trust with local residents. The lessons we learned in Flint are invaluable and are allowing us to help other communities such as Benton Harbor (see page 4).

Flint Partners Recognize Freshwater Future with Award

Freshwater Future's Executive Director, Jill Ryan, received the Glenora G. Roland Pioneer Award in honor of our partnership with the Flint Development Center and the Flint Neighborhood Coalition to help residents test their water for lead by a trusted source. We look forward to continuing our partnership in the next phase of the project, building the Flint Community Lab. Special thanks to our partners,the University of Michigan Biological Station and ThermoScientific, for technical assistance and support for lab design and equipment.

Applying Lessons Learned In Flint To Help Benton Harbor: It's Not Just About Filters

Reverend Edward Pinkney, Executive Director of Black Autonomy Network Community Organization, heard of Freshwater Future's community youth water testing program in Flint and reached out for assistance. He shared the community's concern about lead in their drinking water, reminiscent of lead problems in other cities. In October of 2018, the City of Benton Harbor, Michigan notified residents that the municipality was out of compliance with the national Lead and Copper Rule. This meant that of the homes they tested (only 30), 8 homes with 15 ppb of lead put them in the 90th percentile. The Lead and Copper Rule is designed to assess the effectiveness of corrosion control. **From a health perspective no amount of lead in drinking water is safe.**

Our experiences in Flint taught us the important lessons of 1) listening to community when they suspect a problem with their water, 2) providing real-time information through science to community members, and 3) the importance of providing education about the meaning of the results. Rev. Pinkney, a water activist and community organizer, understood how well the issue of trust and access to information were interrelated.

Applying these lessons learned, Freshwater Future worked with Rev. Pinkney and the community to collect and analyze nearly 45 water samples last October. Our testing results confirmed there was a problem. Of all the samples collected, none of the residents who tested for lead in their drinking water had a properly working filter.

Data from Flint had clearly shown that properly working and maintained filters were effective in reducing lead levels in homes.

Reverend Edward Pinkney

We knew residents increased access to filters needed to be a top priority. After many conversations with the City of Benton Harbor and the Michigan Department of Environment, Great Lakes, and Energy (formerly known as MDEQ), the Berrien County Health Department responded by distributing point of use water filters to those in the city. After filter distribution began, we started training community members on filters, ensuring they had the knowledge needed to properly install and maintain them. We held a 2-day "Train-the-Trainer" filter education event that included water filter distribution. We also provided a resource card so they knew who to contact for future needs.

A Community Council, made up of local leaders, is now being formed to continue to advocate for the needs of the community as well as ensure residents are able to access the resources they need to protect their families from the harmful impacts of lead.

Because there is NO safe level of lead, especially for children, ensuring the availability of information and filters is critical as the system is investigated for the cause of the problem and solutions are applied. Freshwater Future will continue to support our partners and Benton Harbor residents as they work to address lead contamination.

Does Your Community Need a Water Council?

The purpose of a community Water Council is to engage residents in decisions that impact access and quality of water. Learning about threats, problems and sharing resident voices is critical to ensuring decision makers take into account your communities' priorities and concerns such as safe, clean, affordable, and accessible drinking water for the community and protecting public health.

Contact us if you would like to know more about how to set up a Water Council in your community.

MARK ORDONEZ | FLICKR.COM

Screening For PFAS—The Forever Chemical In Drinking Water

A family of chemicals known as PFAS or perfluoroalkyl substances, are extremely toxic, at levels in the low parts-per-trillion (ppt). PFAS are used in firefighting foams, nonstick cookware, food packaging, stain and water repellents, and many other common products. These harmful chemicals can contribute to a number of health issues such as thyroid problems, kidney and bladder cancer, developmental delays in children and more.

The U.S. EPA's lifetime exposure in drinking water of 70 ppt for PFOA and PFOS (two specific forms of PFAS) is found to be too high according to new studies. In April, Michigan's Department of Health and Human Services released new screening standards that are significantly lower for PFOA at 8 ppt and PFOS at 8 ppt.

This family of toxic chemicals are being found in drinking water all over the region and country at military bases including Wurtsmith Air Force Base in Michigan, at a firefighting training school in Marinette, Wisconsin, and in Rockford, Michigan where they had been dumped by a shoe factory.

Michigan is leading the way in testing for PFAS. In 2018 Michigan began testing public water supplies for the presence of PFAS in the more than 13,000 public drinking water systems state-wide. The testing discovered two new locations with high levels of PFAS in public systems, as well as 69 locations that contained PFOA and PFOS in the range of 10-69 ppt.

In addition to the public systems, 2.6 million Michigan residents are served by private wells. How will they know if their water is contaminated by PFAS? To date, the state has not made any plan available for testing these wells. The Freshwater Future team knew that having access to trusted data on water quality was helping Flint residents, so it seemed just as important to figure out a way to help residents around the Great Lakes region determine whether their water contained PFAS.

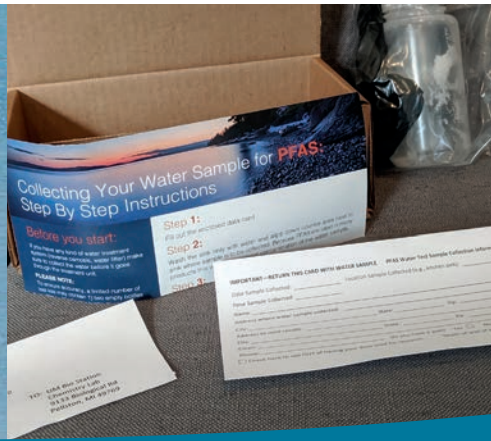
Very little monitoring for the presence of PFAS has been done in the US, including the Great Lakes region, with few labs offering the service, and the labs that offer the testing charge in the range of $300 per sample. We knew this price would be cost prohibitive for many people. We were again able to partner with the University of Michigan Biological Station laboratory to set up a lab to offer low-cost PFAS screening.

We believe the most important first step is finding the contamination sites, providing information to people drinking the water about the levels they may be drinking, the potential health impacts as shown by research, and how they can reduce the level of the contaminant in their drinking water.

Because of their long history of use in common products, PFAS can now be found around the world in every part of the environment, and now that we know the harm they can do to human health, we must determine how to protect ourselves. We are working with partners across the region to get more testing done to ensure people have safe water to drink. We would love to work with your community as well. For more information, please check out the information on our website, or give us a call at 231.348.8200.

Concerned Your Well Water Might Contain PFAS? Low-Cost Screening Available

Freshwater Future believes everyone has a right to know what is in their drinking water, regardless of what's in their wallets. We have partnered with the University of Michigan Biological Station and donors to offer PFAS testing for homes on private wells at reduced rates. You can help make our kits even more accessible by selecting Gift a Kit at check out. We'll use your donation to send a kit to someone else in need. Go to freshwaterfuture.org/services/water-testing/ to order your kit today. For more information, please check out the information on our website, or give us a call at 231.348.8200.



Lake Erie Toxic Algal Blooms: What Will It Take To Protect Drinking Water For Millions?

The problem of toxic algal blooms in Lake Erie is not new; massive blooms are appearing in the lake each year, leaving millions on edge wondering if their drinking water is safe. Each summer residents, commercial fishers, and tourism businesses are on the lookout for warnings about the quality of their beaches and threats to drinking water. Addressing nutrient pollution and algal blooms in Lake Erie has been a top priority for Freshwater Future for many years now, and we're in this for the long game—for the residents and communities that depend on and live around the lake.

Collaboration

Freshwater Future's strength has always been to drive and support collaboration, we know that complex environmental problems are best solved by bringing together a diversity of voices and ideas. So when the Ohio Environmental Council (OEC) asked us to facilitate conversations about Lake Erie algal blooms beginning in early 2015, it was a natural fit. OEC and other Ohio-based organizations had been working on Lake Erie for years already. They asked Freshwater Future to facilitate strategic conversations among collaborators and to invite Canadian organizations to the effort.

Organizations pushed for action by governments on both sides of the border and successfully established a commitment from the Governors of Ohio and Michigan and Premier of Ontario to reduce harmful algal blooms by 40% by 2025. Groups also worked together to produce joint comments on draft plans developed by governments, created an expectations document that clearly laid out what was required in a strong action plan to protect the lake, made budget submissions, and presented to various levels of government. While the government action plans to address algal blooms in Lake Erie have all been released, the hard work is really just beginning.

Innovative Approaches To Reducing Toxic Algae

In Ontario, Freshwater Future Canada is helping conservation groups protect wetlands. The protection and restoration of wetlands to filter and reduce nutrient runoff into Lake Erie watersheds is a key component of the Canada-Ontario Lake Erie Action Plan. Additionally, active participation and strong community engagement around policy has helped bolster these efforts.

In the US, Toledoans for Safe Water and Lake Erie Advocates worked to have voters in Toledo pass a measure granting the Lake Erie ecosystem rights to "exist, flourish, and naturally evolve"—providing the lake with the same rights as a person. There are also citizens and environmental organizations requesting regulatory mandates with accountability and strict penalty to polluters as a way to protect public health and economic sustainability for Lake Erie and other bodies of water that are contaminated with Toxic Algal Outbreaks.

Through collaborative work with various individuals, groups and policy makers, we have made progress to protect Lake Erie and it's natural ecosystem and this source of drinking water for millions of people. However, much work remains undone. Solutions like the Lake Erie Bill of Rights, are one of many ways protective approaches can be instituted at local, state, and binational levels. But it also takes more than just laws being passed. Freshwater Future is committed to continue to find collaborative and innovative solutions to address harmful algal blooms that threaten public health.

Freshwater Future Collaborates to Protect Lake Erie

- **2014:** Freshwater Future Partners with Environmenta Defense Canada to produce report *Clean, Not Green: Tackling Algal Blooms in the Great Lakes*
- **2015:** Western Basin of Lake Erie Collaborative signed by Governors of Michigan, Ohio, and the Premier of Ontario
- **2016:** Binational targets for nutrient reduction released
- **2018:** Ohio Environmental Protection Agency declares Lake Erie impaired
- **2018:** Canada-Ontario Lake Erie Action Plan released

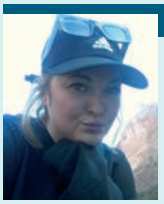
Freshwater Future, The Junction Coalition of Toledo, and Clean Water For All Campaign Host Great Lakes Youth Water Camp.

WENDY PIERSALL | FLICKR.COM

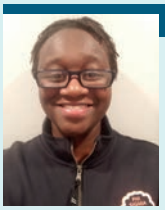
Thank You to Our Interns

Several talented individuals helped Freshwater Future these past several months—special thanks to the following:

Alana Honaker worked in the lab in Pellston running water samples testing levels for PFAS. She is a current student at the University of Minnesota studying Environmental Science, with a focus in environmental policy.



Desiree Lina helped with website maintenance, producing our weekly email blast, and PFAS test kit distribution. Desiree is trained as a health and wellness consultant.



Alexis Smith worked on a technology project to document stormwater flooding (stay tuned for more in future newsletters) and helped with youth initiatives. She recently graduated from a rigorous 5-year program at the University of Toledo with a Bachelor's of Science in Bioengineering.

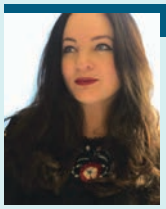
Sasha Dailey worked on communications including social media. She is a recent graduate of Eastern Michigan University with a degree in Communications.

Je Won Moon is a visiting intern from South Korea and working in Toronto, Canada. Je Won is researching agricultural pollution that contributes to toxic algal blooms and will be assisting with more research on the emerging contaminant PFAS. Je Won has a Bachelor Degree in Mechanical Design from KonKuk University.

Goodbyes and Welcomes

A few of our Freshwater Future family are moving on to new positions. Special thanks to Becca Nelson, April Weppler, Tony Maas and Izzy Marrah for a combined 20 years of hard work and dedication as part of our team/family. They will all be greatly missed and leave big shoes to fill.

Fortunately, we have two new staff members to welcome to the team:



Angeline D'Balentine, Development and Membership, is managing our database and membership programs. Angeline brings extensive experience with project management, data and technology skills, and creative talents too. She received her B.A. from Eastern Michigan University, and her M.S. from Full Sail University, both magna cum laude.

Kristy Meyer, Associate Director, is supporting community groups in forwarding equitable policies and regulations for clean, safe, affordable, and accessible drinking water in communities throughout the Great Lakes states and provinces. Previously the Vice President of Policy with the Ohio Environmental Council, Kristy brings more than 15 years of experience in policy and nonprofit leadership. Kristy has a B.S. in Environmental Biology and Business Administration from Heidelberg University in Tiffin, Ohio. She earned a M.S. from James Cook University in Queensland, Australia, where she worked with Aboriginal people on Natural Resource Management Issues.

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In Memory of Dr. Robert E. Moran, Given by Laura Gauger
In Memory of Jim Nirschl, Given by Patti Lee

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