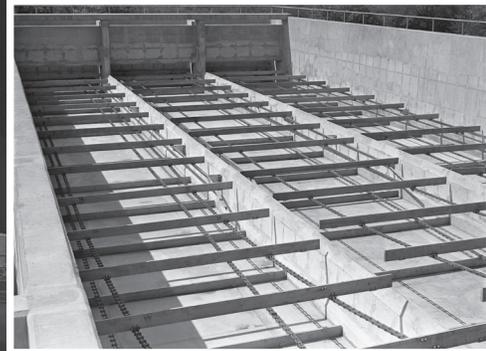


# CITY OF ANN ARBOR: 2022 Water Quality Report

With summary of your water data from Jan. 1-Dec. 31, 2022



1938 - Softening Basins



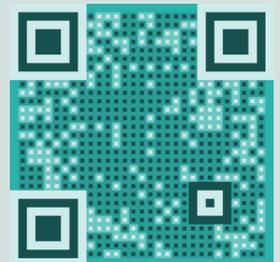
2023 - Time for replacement



*In 2022, Ann Arbor continued to meet all drinking water regulations and City of Ann Arbor water quality goals to produce water of better quality than regulations require. In this report you will find a summary of the 2022 water quality data demonstrating the high quality of the drinking water Ann Arbor delivers.*



ANN ARBOR  
WATER



# A MESSAGE TO OUR CUSTOMERS

## Summarizing 2022 Water Quality Test Results

### Protecting Safe Drinking Water: Keeping Our Customers Informed



Dear Customers,  
We have continued to produce high quality water through another year with events for the history books. Our committed and experienced staff have responded admirably to water quality threats, and we have made strategic investments in our infrastructure. We made substantial progress on strategic planning and our project to upgrade portions of the water plant built in the 1930s (a project update is included on page 3). We also installed a new Supervisory Control and Data Acquisition (SCADA)

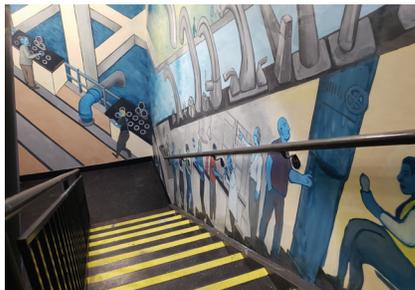
system at the water plant that replaces a system installed in the early 1990's. We installed new sentinel monitoring wells to provide an early warning system if 1,4-dioxane were to migrate towards the city's drinking water supply. We progressed our service line inventory and service line replacement programs and are well ahead of the 2025 compliance date. We commissioned a mural to support the City's art in public places program that is part of the Water Treatment Plant Tour route and is available for visitors to view (photo included below). Finally, we unified all the City's water units under one brand, Ann Arbor Water, that will focus on sharing with our customers the collaborative effort required to maintaining a healthy urban water cycle, all united under our One Water resource (page 4).

As the national news continues to report releases of contaminants into rivers and wells used as sources for drinking water, I want to remind our customers that we have business continuity and emergency response plans in place, along with a well-trained staff of licensed water treatment operators to ensure your water remains safe. This past year, in August, we exercised those plans in response to a chemical release containing hexavalent chromium was discovered 40 miles upstream of Ann Arbor. Fortunately, the release was caught upstream and did not reach our intakes. As EGLE and others were working to provide data upstream, we jumped into action to protect our drinking water by monitoring our source water for chromium and developing plans for treatment should they be needed. While we hope that we never have to execute our emergency response plans, we learned that we were prepared and well-positioned to ensure that the quality of the drinking water supplied to Ann Arbor Water customers was never at risk.

As you look through the water quality data in this report that was produced over the 2022 calendar year, please take note that we complete over 175,000 discrete water quality tests on the City's drinking water per year. We are constantly striving to achieve water quality that is better than what regulations require and have adopted water quality goals that are more stringent than state and federal regulations. While this report contains data on contaminants detected, many other contaminants not listed here were analyzed for and not detected. If you have questions about this report, please contact us at 734.794.6426, email [water@a2gov.org](mailto:water@a2gov.org) or visit [www.AnnArborWater.org](http://www.AnnArborWater.org).

*Brian Steglitz*

Sincerely,  
Brian Steglitz, PE, Manager of Water Treatment Services, F-1 Licensed Operator



## ABOUT THIS REPORT

This report covers the drinking water quality for the City of Ann Arbor (Water Supply Serial Number 0220) for the 2022 calendar year. The State of Michigan and the United States Environmental Protection Agency (U.S. EPA) require us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2022 and conducted additional monitoring to ensure we maintain better water quality than regulations require. The information provided is a snapshot of the quality of the water we provided to you in 2022. Included are details about where your water comes from, what it contains, and how it compares to U.S. EPA and State standards.

## WHAT'S INSIDE THIS REPORT:

- A Message to Our Customers, page 2
- About This Report, page 2
- Planning for the Future, page 3
- Ann Arbor Water, page 4
- Where does our water come from? page 5
- Water Quality Data, page 6-7
- Contaminants of Concern, page 8
- Abbreviations and Definitions, page 9
- Service Line Inventory Updates, page 10
- Water Champions, page 11
- Kids Activities, page 12

# PLANNING FOR THE FUTURE

**Water Treatment Plant Facility Plan:** In 2022 the City of Ann Arbor began a Water Treatment Plant Facility Plan project to evaluate the water treatment plant’s operational, maintenance, and regulatory needs and prepare the City to rehabilitate aging infrastructure from the original 1938/1949 portions of the plant. This project will position the water plant to effectively treat its source water and to continue providing award-winning water to Ann Arbor’s community and customers for years to come, even if faced with impacts from a changing climate or the presence of contaminants such as PFAS, Cryptosporidium or 1,4-dioxane in the watershed.

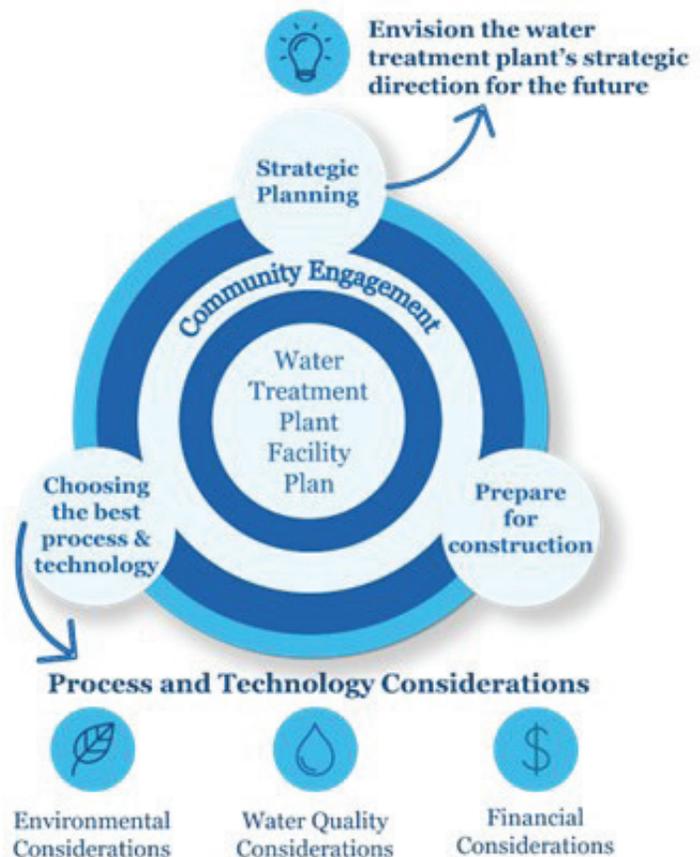
**Timeline:** The project is focused on facility planning for the existing site, technology selection and planning for upcoming large-scale construction. Construction will begin once the alternatives analysis, strategic planning, pilot testing and funding investigations are complete, all of which are being informed by community engagement. Please visit <http://www.a2wtpfacilityplan.com> for more information.



## PROJECT APPROACH:

The project is comprised of four major parts

1. Strategic Planning consults city decision-makers, major customer representatives, and the community to lay out a vision and road map for Ann Arbor’s water supply.
2. The Alternatives Analysis (choosing the best process and technology) identifies the preferred approach to upgrade the Water Treatment Plant to meet water demands reliably.
3. The Pilot Testing (prepare for construction) will provide real-world information on how treatment technologies will work with the City’s water sources, prior to full-scale implementation.
4. Community Engagement is integrating the community’s perspective into the strategic planning process, and informs the community about project scope and updates.



# INTRODUCING ANN ARBOR WATER – A NEW BRAND FOR CITY OF ANN ARBOR’S WATER UTILITIES



This year, Ann Arbor’s water units united under one brand to reinforce the connection between drinking water, resource recovery, and stormwater management in protecting public health and the environment. Maintaining a healthy urban water cycle requires a diverse, experienced staff (who work 24x7, 365 days/year). Check out the map to the right to see Ann Arbor’s creek sheds and infrastructure involved in our urban water cycle.

## What can you do to protect the future of your water?

- Protect the Huron River
- Recognize the importance of infrastructure investments to ensure the future of our water resources quality, quantity, reliability
- Understand the value of your water (it takes all types - Huron River water, your drinking water, management of your stormwater and rain gardens, wastewater treatment, and all the infrastructure required to keep the water flowing)
- Get Involved! Sign up for our newsletter at [www.AnnArborWater.org](http://www.AnnArborWater.org) to get info about upcoming events and local issues. Build a rain garden. [Sign up for Aquahawk alerts](#) on your water usage. Keep leaves out of your storm drains. Don’t flush personal care products or fats/oil/grease down the drain.

Water is all around us, every day, involved with almost everything we do. Twenty-four hours a day, Ann Arbor’s water infrastructure, largely unseen, gives our lives life. Because just below the surface, under roads, sidewalks, bike lanes, even the parks we play in lies a vast network of pipes, valves and channels, made of steel, concrete, metal and even dirt, that carry water to and from where we live, work and play. Check out Ann Arbor Water’s newest video that showcases the world of Ann Arbor Water – lying just beneath your feet.



## HOW DO WE KEEP YOUR DRINKING WATER SAFE?

Over the years, Ann Arbor has invested in infrastructure to provide multiple lines of defense against contamination to produce high quality drinking water. For example, we use ozone, ultraviolet light, and chloramines to protect against microbial contamination; a softening process that can remove inorganic contaminants, radioactive contaminants, and particles; and a filtration process with granular activated carbon that can remove organic contaminants, pesticides, herbicides, particles, and microorganisms. We also monitor water quality parameters continuously before and after treatment to ensure our treatment processes are working successfully to produce high quality water. Not only do these treatment steps prove to be reliable year after year but we also have an exceptional group of employees who ensure the equipment, treatment processes, and distribution system continues to run 24 hours per day, seven days per week even on weekends, holidays and through snowstorms.

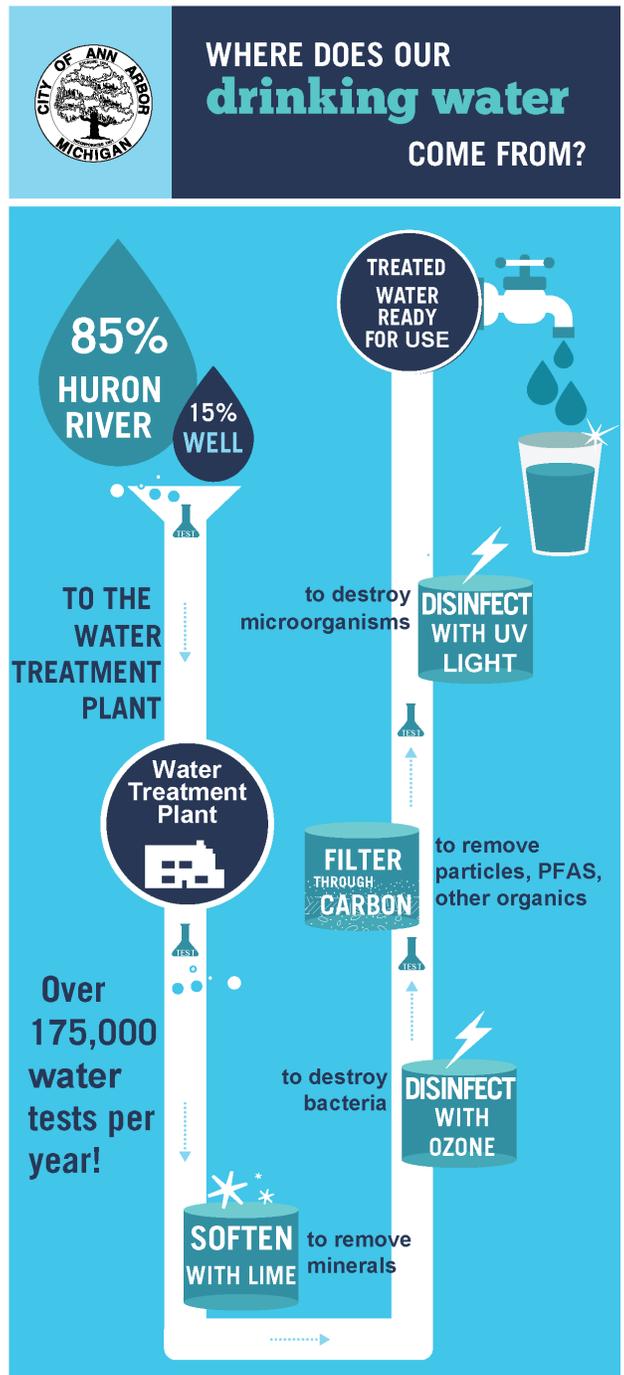
## BEFORE TREATMENT, WHERE DOES THE WATER COME FROM?

Sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells (for both tap and bottled water). As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and in some cases radioactive material or substances resulting from the presence of animals or from human activity. To ensure that tap water is safe to drink, U.S. EPA prescribes regulations that limit the levels of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants in water does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800.426.4791.

### **Contaminants that may be present in source water include:**

- Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants which can be naturally occurring or be the result of oil and gas production and mining activities.

**Source Water Assessment Program:** Federal regulations require states to develop and implement Source Water Assessment Programs (SWAPs) to compile information about potential sources of contamination for their source water supplies. This information allows us to better protect our drinking water sources. In 2004, the State of Michigan performed a Source Water Assessment on the city's system. To request a copy of the assessment, call us at 734.794.6320. In 2017, the city completed a Surface Water Intake Protection Plan (SWIPP), and updates of the plan are currently underway. Implementation of this plan continues through system-wide data collection and monitoring, community staff training, contingency planning, public outreach, and vegetation management.



# WATER QUALITY DATA

The City of Ann Arbor is committed to providing exceptional water quality. We routinely monitor for contaminants in your drinking water according to federal and state standards, and we conduct additional monitoring beyond that which is required. This report includes information on all regulated drinking water parameters detected during calendar year 2022. The presence of contaminants does not necessarily indicate the water poses a health risk. Many additional parameters were tested but not detected and are not included in this report. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All the data is representative of the water quality, but some may be more than one year old. Unless otherwise noted, the data presented in these tables is from testing done Jan. 1 through Dec. 31, 2022.

## Regulated Contaminants Detected (abbreviations and definitions on page 9)

Parameter Detected	Your Water Results		Regulatory Requirements		Violation (Yes/No)	Typical Source of Contaminant
	Highest Level Detected	Results Range	EPA LIMIT MCL, TT, or MRDL	EPA GOAL MCLG or MRDLG		
<b>Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors</b>						
Bromate (ppb)	4.6 <sup>1</sup>	<1.0 - 9.8	10	0	No	Byproduct of ozone disinfection
Chloramines (ppm) <sup>2</sup>	2.6 <sup>1</sup>	0.4 - 3.5	MRDL: 4	MRDLG: 4	No	Disinfectant added at Water Plant
Haloacetic Acids (HAA5, ppb) <sup>2,3</sup>	13 <sup>3</sup>	ND - 11	60	N/A	No	Byproduct of drinking water disinfection
Total Organic Carbon (TOC)	57% removed <sup>4</sup>	49 - 65% removed	TT: 25% minimum removal	N/A	No	Naturally present in the environment
Total Trihalomethanes (TTHM, ppb) <sup>2,3</sup>	6 <sup>3</sup>	1.9 - 6.9	80	N/A	No	Byproduct of drinking water disinfection
<b>Radiochemical Contaminants (tested in 2020)</b>						
Gross Alpha (pCi/L)	0.933 ± 0.47	N/A	15	0	No	Erosion of natural deposits
Radium 226 and 228 (pCi/L)	2.00 ± 0.85	N/A	5	0	No	Erosion of natural deposits
<b>Inorganic Contaminants</b>						
Barium (ppb)	19	N/A	2000	2000	No	Erosion of natural deposits; discharge of drilling wastes; discharge of metal refineries
Fluoride (ppm)	0.89	0.21 - 0.89	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	0.8	0.2 - 0.8	10	1	No	Runoff from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (ppm)	0.14	<0.025 - 0.140	1	1	No	Runoff from fertilizer use; leaching from septic tanks and sewage
<b>Microbiological Contaminants</b>						
Turbidity (NTU)	0.28	100% of samples ≤ 0.3 NTU	1 NTU and 95% of samples ≤ 0.3 NTU	N/A	No	Naturally present in the environment
Total Coliform <sup>3</sup>	1 positive out of 116 tested in Sept.	0 - 0.9% positive	TT	N/A	No	Naturally present in the environment
<b>Per- and polyfluoroalkyl substances (PFAS)<sup>5</sup></b>						
Perfluorohexanoic acid (PFHxA, ppt)	5.9 <sup>1</sup>	2.1 - 6.0	400,000	N/A	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorobutane sulfonic acid (PFBS, ppt)	<1.9 <sup>1</sup>	<1.9 - 2.0	420	N/A	No	Discharge and waste from industrial facilities; stain-resistant treatments
<b>2020 Lead and Copper Results from Customer Faucets</b>						
Parameter	Customer taps 90th percentile <sup>6</sup>	Customer taps Range	Action level <sup>7</sup>	MCLG	Violation (Yes/No)	Typical Source of Contaminant
Copper (ppb) <sup>7</sup>	100	3.3 - 93 (0 out of 51 sites above Action Level)	1300	1300	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) <sup>7</sup>	1	<1.0 - 23 (1 out of 51 sites above Action Level)	15	0	No	Lead service lines; corrosion of household plumbing including fittings and fixtures; erosion of natural deposits

<sup>1</sup> Highest Running Annual Average

<sup>2</sup> Measured in the Distribution System

<sup>3</sup> Highest Locational Running Annual Average

<sup>4</sup> Average percent removal

<sup>5</sup> PFAS MCLs established by EGLE not EPA. Data analyzed by EGLE approved method are included here. See [www.a2gov.org/PFAS](http://www.a2gov.org/PFAS) for more data.

<sup>6</sup> 90% of samples taken from customer taps were less than or equal to this level

<sup>7</sup> Lead and Copper are regulated by Action Levels. If 90th percentile at customer taps exceeds action level, water system must take additional action.

# WATER QUALITY DATA

## 2022 Special Monitoring

Parameter Detected (Units)	Your Water Results		Typical Source of Contaminant
	Average Level Detected	Results Range	
1,4-Dioxane (ppb)	<0.12	<0.12	Groundwater contamination from manufacturing process and landfills
N-Nitrosodimethylamine (NDMA) (ppb)	< 10	N/A	Byproduct of disinfection
Perchlorate (ppb)	<4.00	N/A	Nitrate fertilizer runoff; contamination from industrial manufacturing process
Sodium (ppm)	66	51-82	Erosion of natural deposits
Perfluorooctanoic Acid (PFOA), Perfluorooctane Sulfonic Acid (PFOS), Perfluorohexane Sulfonic Acid (PFHxS), Hexafluoropropylene Oxide Dimer Acid (HFPO-DA), Perfluorononanoic acid (PFNA) (ppt)	<1.9	<1.9	Firefighting foam; discharge and waste from industrial facilities; discharge from electroplating facilities; stain-resistant treatments

## Other Water Quality Parameters of Interest

Parameter Detected (Units)	Your Water Results	
	Average Level Detected	Results Range
Alkalinity, total (ppm as CaCO <sub>3</sub> )	58	28-84
Aluminum (ppm)	0.018	N/A
Ammonia as N (ppm)	<0.10	<0.10 - 0.16
Arsenic (ppb)	<1.0	N/A
Calcium (ppm)	27	18-51
Chloride (ppm)	114	92-140
Chromium (total) (ppm)	<2.0	N/A
Conductivity (µmhos/cm)	598	501-710
Hardness (CaCO <sub>3</sub> ) (ppm)	121	90-170
Hardness (CaCO <sub>3</sub> ) (gpg)	7	5.3-9.9
Iron (ppm)	<0.20	N/A
Lead at Water Treatment Plant (ppb)	<1.0	N/A

Parameter Detected (Units)	Your Water Results	
	Average Level Detected	Results Range
Magnesium (ppm)	14	21-Jun
Manganese (ppm)	<0.020	<0.020
Mercury (ppb)	<0.20	N/A
Non-Carbonate Hardness (ppm)	62	36-100
pH (S.U.)	9.3	9.0 - 9.6
Phosphorus (total, ppm)	0.26	0.16 - 0.36
Potassium (ppm)	3.1	N/A
Sulfate (ppm)	48	32-64
Temperature (Degrees Celsius)	15.3	5.9-25.6
Total Solids (ppm)	357	318-447
Zinc (ppb)	<5.0	N/A
Nitrite in Distribution (ppm)	0.063	<0.025 - 0.23



### DO I NEED TO TAKE ANY SPECIAL PRECAUTIONS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at: 800.426.4791.

# CONTAMINANTS OF CONCERN

## PFAS

Per- and polyfluoroalkyl substances (PFAS) are a group of chemicals that have been classified by the EPA as an emerging contaminant. PFAS have been around since the 1950s, but we didn't know much about their effects until the early 2000s, when scientists began releasing data on PFAS health impacts and their persistence in the environment. For decades, they have been used in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, fire-fighting foams, and metal plating. They are still widely used today. PFAS have been found at low levels both in the environment and in blood samples of the general U.S. population. PFAS are persistent, which means they do not break down in the environment. They also bioaccumulate, meaning the amount builds up over time in the blood and organs.

Currently, granular activated carbon (GAC) filtration is the best available technology for removing PFAS in drinking water. Use of this technology has allowed the city to produce water with PFAS concentrations significantly below all Maximum Contaminant Levels (MCLs) adopted by the state of Michigan in 2020. The Environmental Protection Agency (EPA) recently released new health advisory levels for four PFAS compounds in 2022, three of which are consistently not detectable in our finished drinking water after GAC treatment (PFOS, PFOA, GenX), and PFBS has never measured above Michigan's Maximum Contaminant Level which is even lower than EPA's new health advisory level. We continue to meet all PFAS regulations in our finished drinking water and are watching closely for regulatory developments as Maximum Contaminant Levels (MCLs) for several PFAS are expected to be released by EPA this year. Meanwhile, the city continues to monitor for PFAS compounds, including both regulated compounds and unregulated compounds in source water and drinking water, and remains committed to providing safe drinking water that is better quality than regulatory guidelines require. Samples collected by the city are analyzed by an independent lab each month and we post all data for source water and drinking water PFAS monitoring on our website. Additional information and PFAS results can be found online at [www.a2gov.org/PFAS](http://www.a2gov.org/PFAS).

## LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and children who drink water containing lead could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Ann Arbor is responsible for providing high quality

drinking water but cannot control the variety of materials used in plumbing components. The City of Ann Arbor has no known homes with lead service lines, but some of our customers do have lead components to their internal plumbing. Homes with copper plumbing installed before 1988 are most likely to have lead solder. Faucets, fittings, or valves sold before 2014 may have a higher lead content than newer plumbing materials. Water that sits in contact with lead containing plumbing materials may contain higher amounts of lead as plumbing components leach into the water. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800.426.4791) or at <http://www.epa.gov/safewater/lead>. The City of Ann Arbor also offers one free lead and copper test per household that you can sign up for by visiting [www.a2gov.org/LCR](http://www.a2gov.org/LCR).

## 1,4-DIOXANE

Gelman Sciences (now Pall Corp., a division of Danaher Corp.) polluted groundwater in parts of Washtenaw County, including parts of the city as well as Ann Arbor and Scio Townships, when it improperly disposed of industrial solvents containing 1,4-dioxane between 1966 and 1986. That pollution has since spread through the aquifer. The city has been engaged with neighboring communities and the state to, among other things, push Gelman to delineate, contain and clean up its pollution. While there is still active litigation in Washtenaw County Circuit Court as part of a suit brought by the state against Gelman, in 2021 EGLE requested that EPA reinstate assessment of the Gelman site for the National Priorities Listing (NPL) process. EPA is currently conducting a Site Assessment to decide if the site should be added to the National Priorities List. As part of that process, a Sampling Analysis Plan (SAP) and sampling at the site were completed in 2022. Additional and current information on the status of the clean-up can be found at [www.a2gov.org/departments/water-treatment/Pages/Gelman-1,4-Dioxane-Litigation.aspx](http://www.a2gov.org/departments/water-treatment/Pages/Gelman-1,4-Dioxane-Litigation.aspx). Information also is available on the EPA's website at [www.epa.gov/mi/gelman-sciences](http://www.epa.gov/mi/gelman-sciences).

The City of Ann Arbor has been monitoring its water sources and the plume for more than 30 years to ensure the long-term safety of the city's drinking water. In 2022, city staff installed additional sentinel wells between the leading edge of the plume and Barton Pond to provide advanced warning if the plume migrates toward our source water. Analytical results for the city's source and drinking water can be found at [www.a2gov.org/DrinkingWater](http://www.a2gov.org/DrinkingWater).

# CONTAMINANTS OF CONCERN

## CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100% removal. Our monitoring indicates the presence of these organisms in our source water, but not in the finished water. Current test methods do not allow us to determine if the detected organisms in our source water are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. Immunocompromised people, infants and small children, and the elderly are at greater risk of developing severe illness. Immunocompromised people are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water. To address the occurrence of Cryptosporidium in the Huron River, the city added ultraviolet light (UV) disinfection to the water treatment process. UV disinfection is the best available technology to inactivate Cryptosporidium.

## ABBREVIATIONS/DEFINITIONS & MORE INFORMATION

### ABBREVIATIONS & DEFINITIONS:

**AL-Action Level:** The concentration of a contaminant, which if exceeded, triggers treatment or other requirements a water system must follow.

**CaCO<sub>3</sub>:** Calcium carbonate.

**GPG-Grains per Gallon:** A unit of water hardness defined as 1 grain (64.8 milligrams) of calcium carbonate dissolved in one gallon of water.

**MCL-Maximum Contaminant Level:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MCLG-Maximum Contaminant Level Goal:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MRDL-Maximum Residual Disinfectant Level:** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG-Maximum Residual Disinfectant Level Goal:** The level of a drinking water disinfectant below

which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**N/A:** Not applicable. When listed under the range column, N/A indicates that only a single sample was analyzed for the year.

**NTU-Nephelometric Turbidity Units:** A measure of cloudiness in the water.

**pCi/L:** picocuries per liter (a measure of radioactivity).

**ppm:** parts per million or milligrams per liter.

**ppb:** parts per billion or micrograms per liter.

**ppt:** parts per trillion or nanograms per liter.

**S.U.:** Standard Units.

**TT-Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.

**µmhos/cm:** Microohms per centimeter (a measure of electrical conductivity).



### There are many ways to stay informed about your drinking water.

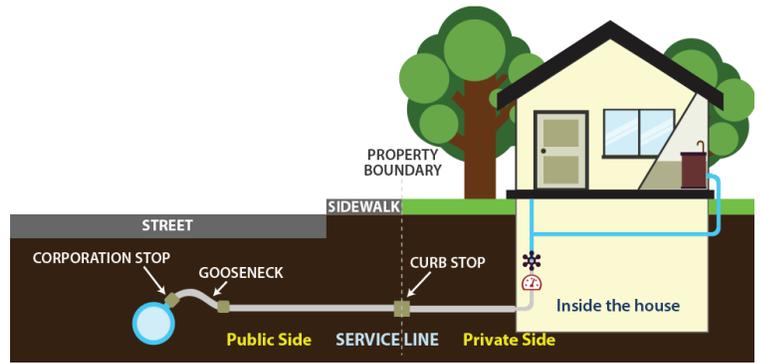
- Sign up for Ann Arbor Water email notifications and our monthly newsletter, Ann Arbor Water.
- [Request a Water Treatment Plant tour.](#)
- Email [water@a2gov.org](mailto:water@a2gov.org) or call 734.794.6426 with your water questions.

Please share this report with all people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand and mail.

To receive a printed copy of this report please call 734.794.6320, email [water@a2gov.org](mailto:water@a2gov.org), or visit [www.a2gov.org/DrinkingWater](http://www.a2gov.org/DrinkingWater).

## Water Meter and Galvanized Line Replacement Updates

For the last three years the City has been working to replace all of its residential water meters. This project was being done in conjunction with the City's service line materials inventory. The city is required by Michigan's Lead and Copper rule to inspect all water service lines to determine material type and eligibility for replacement. Galvanized iron water service lines that were previously connected to the water system via a lead gooseneck can release lead into drinking water when disturbed, such as when utility or road work is performed. The city has historic data on the publicly owned portion and is now in the process of gathering data on the privately owned portion of the service lines. More than 3000 service lines must still be inventoried, and more than 2000 meters must still be replaced. If you are one of these homes, you will soon receive another letter to schedule the inspection and meter replacement. These meters are reaching the end of their useful life and must be replaced before they fail. Failure to respond to the letter and schedule the replacement will result in a monthly surcharge of \$50.00 on your water bill, as authorized by city code Chapter 27 Section 2:38.



*If you're eligible for a free service line replacement, the city will send you a letter. If you don't get a letter, your service line has never been connected to lead piping and is not eligible for replacement (that is good news for you). You can view your material type by using the Service Line Map found at [www.a2gov.org/lcr](http://www.a2gov.org/lcr).*

## Tips to Reduce Potential Lead Exposure

It's important to note that even if your service line is copper or plastic, there could be other sources of lead in your household plumbing. The City of Ann Arbor offers one free lead test per household. If you are interested, please visit [www.a2gov.org/leadsample](http://www.a2gov.org/leadsample) or contact the Water Treatment Plant at 734.994.2840 to arrange pickup of a testing kit. Other useful information resources include:

- [Michigan Department of Environment, Great Lakes and Energy \(EGLE\) www.michigan.gov/MILeadSafe](http://www.michigan.gov/MILeadSafe)
- [Reducing Potential Lead Exposure from Drinking Water Fact Sheet \(PDF\)](#)

## Service line Inventory and replacements

In 2019, the City of Ann Arbor began the replacement of eligible galvanized service lines and will continue replacements at a rate of at least 5% per year. 301 water service lines have been replaced via the program as of December 31, 2022. Replacements are coordinated with water main and road projects to minimize disruptions of water and road services. Eligible residents will get a letter when their service line is scheduled for replacement. The city's water service material inventory map website shows service lines that have been replaced, those that are eligible, and those that require in-home verification. For more information, visit [www.a2gov.org/lcr](http://www.a2gov.org/lcr).

### SERVICE LINE INVENTORY STATUS UPDATE

# OF LEAD SERVICE LINES	UNKNOWN MATERIAL SERVICE LINES	TOTAL SERVICE LINES
2019 1 known	2019 5,214	2019 25,864
2020 0 known	2020 4,760	2020 25,864
2021 0 known	2021 1,337	2021 25,864
2022 0 known	2022 1,053	2022 25,914

Help us complete our Service Line Inventory by scheduling your water meter upgrade if you have not already done so. To schedule an appointment, please contact Customer Service by phone at 734.794.6320 or by email at [customerservice@a2gov.org](mailto:customerservice@a2gov.org). Visit <http://www.a2gov.org/meterupgrade> for more information.

## CITY OF ANN ARBOR



If your meter looks like the one on the left (**framed in red**), then please call today to get an appointment to get your service line material inspected and get a new meter like the one on the right. The new meter comes with Aquahawk, an online system that can send you alerts if your water usage spikes due to a leak. [Click here for information on Aquahawk.](#)



Old meter, call to replace.



New meter.

# THANK YOU TO ALL THE PEOPLE INVOLVED IN KEEPING YOUR WATER FLOWING!

*With special thanks to our Water Champions!*



**Amanda Carl**, Water Utility Supervisor at the Water Treatment Plant (WTP). She operates the water treatment plant and keeps our water safe using the plant's ozone disinfection system.



City of Ann Arbor Customer Service Administrative Assistant **Tammy Kokoski**. For 26 years, Tammy has been dedicated to the water billing process and assisting customers with resolving water issues.



**Jerry Hancock** is the city's stormwater and floodplain coordinator. In January 2023 he was awarded the 2023 Eunice L. Burns Environmental Awareness Award by the Ann Arbor Board of Realtors.



**Mark MacArthur** is a City of Ann Arbor Water Utilities Technician. He leads operation and maintenance work at the dam and helps to ensure we meet FERC regulations.



**Nick Baran** is the Water Treatment Plant's inventory control technician. He was recognized for his willingness to step up and pitch in.



The City of Ann Arbor Emergency Management Coordinator is **Sydney Parmenter**. She was recently named Emergency Management Professional of the Year by the Michigan Emergency Management Association.



**Brian Steglitz** is the new Public Services Area Administrator as of January 2023.



**Chris Chadwick** has been instrumental in the success of the Public Works Department.



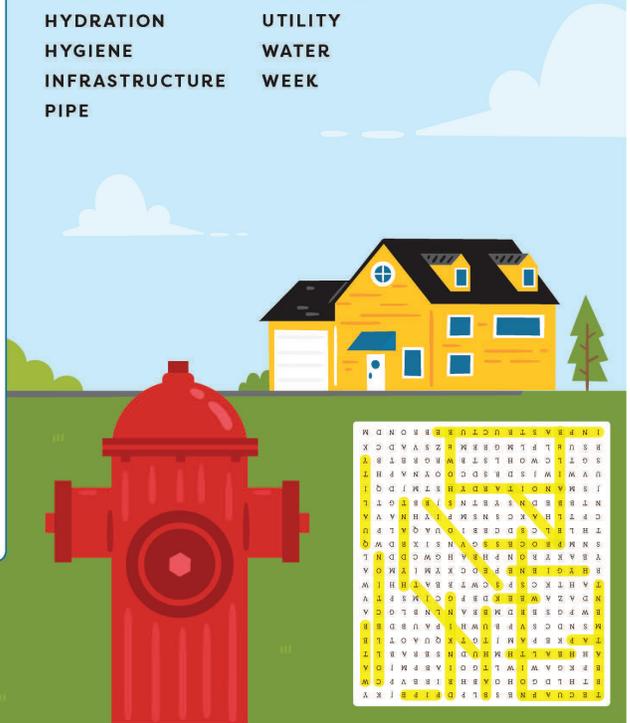
**Alonso Bravo** and **Diego Goeury**, artists from Querétaro, Mexico, recently painted a mural at the water treatment plant.

# KIDS' ACTIVITIES

## Word Find

T E C U A F N E S B L P D P I P E J K Y  
 R T H L D G O H O A B H R I R E V P C W  
 E P K G A W I W L T G O I A B P M J O A  
 A H H E A L T H M H U D N S E R A B L T  
 T A P K E P A M J T G T K Q U A O T L E  
 M S N D C S V P B U W H I F A U B D E R  
 E W P G S E R D M B R A N L N B L G C A  
 N D A Z A W E E K D B F G C I M S P T V  
 T A H T K C S P S C W T R E A T H H I W  
 R H Y G I E N E F E O C K Y M I Y M O A  
 Y E A K Y R O N P H R A H G W C D D N L  
 S N M P R O C E S S G V N S I X R D W Q  
 T H L E L C S D C R B I O U A Q A L P U  
 C P T L H A K C S N S M F I Y H N A V A  
 N T B B E D N S Y E T N S J R B T G T L  
 J S M A N O I T A R D Y H S T M J D Q I  
 U V W I W J S D R S D C O O Y N A P H T  
 S G T L C W O H L S T B W R G R E T B Y  
 R S U E L F L M G R R M E Z S V A D C K  
 I N F R A S T R U C T U R E B R O N D M

- BATHTUB
- COLLECTION
- CONSERVATION
- DRINKING
- FAUCET
- HEALTH
- HYDRANT
- HYDRATION
- HYGIENE
- INFRASTRUCTURE
- PIPE
- PLANT
- PROCESS
- QUALITY
- RELIABLE
- SHOWER
- TAP
- TREATMENT
- UTILITY
- WATER
- WEEK



K Q N O S E E L I C O N I S V I J N I  
 X C C V A S Z W E E D M T E T I N S E  
 A B I B O I E E I S T H O M O T I O S  
 E H A V K I O D O S S F O S I R M A R  
 D C I R I I I O K W H S I  
 T I O A I I N R I S A A N D S E E I N  
 Y A V N R A I I R I N E S O X V H T I A D  
 E I Y O Y N A O E S S O S I M N S  
 O M D X I S N A D E S C O S I M N S  
 T N D C O M B Y E H E N O R A X Y S A  
 Y O M I K A C O O I E E I S T H O M O  
 M I B E W E E C O O A I O S E H Y V E  
 A I E S T O D Y E E Q Q I A M V Z W D N  
 Y O T S N O Y E E K O I E S D E A M E  
 E E O L A Y A I R M M I A S C O N S M E  
 E T I O V O D O X O L I I Y E E X V Y I  
 Z T I R V S S N O O N K I I V Y H V Y  
 Y O I R A S Y I O O T A M I M V O X E E  
 W O A S E I I R E E R H O C O T I L I  
 I K A E I I S O T I S E E E V O S E E

## Eye Spy

-  SHOWER HEAD
-  WATER HOSE
-  GLASS OF WATER
-  FAUCET
-  RAIN CLOUD
-  FIRE HYDRANT
-  KITCHEN FAUCET

