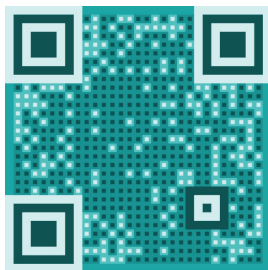


CITY OF ANN ARBOR

# 2021 Water Quality Report

WITH SUMMARY OF YOUR WATER DATA FROM JAN. 1-DEC. 31, 2021



## WHAT'S INSIDE THIS REPORT:

A Message to Our Customers, page 2  
Water Quality Data, page 4-5  
Abbreviations and Definitions, page 7  
Water Champions, page 9

About This Report, page 3  
Contaminants of Concern, page 6-7  
Water Meter Update, page 8  
Kids' Activities, page 10

Photo credit: Tim Ard (top and above); Far right, Mark MacArthur

# A MESSAGE TO OUR CUSTOMERS

## Summarizing 2021 Water Quality Test Results

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



Dear Customers,  
In 2021, Ann Arbor continued to meet all drinking water regulations and City of Ann Arbor water quality goals. In this report you will find a summary of the 2021 water quality data demonstrating the high quality of the drinking water Ann Arbor delivers.

How do we keep your water safe and meet our water quality goals year after year? Over the years, Ann Arbor has invested in infrastructure to provide multiple lines of defense against contamination to produce high quality drinking water, including treatments such as lime softening, ozone disinfection, filtration through activated carbon, chloramine disinfection, and ultraviolet light disinfection. 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, through holidays, a pandemic, and all the “new normal” days in between.

To continue providing high quality water, we must constantly reinvest in our infrastructure both at the water treatment plant and throughout the city. In 2021 we invested in projects such as replacement of aging roofs, brick, and concrete at the water treatment plant; updated filter control instrumentation; replaced more than 6,000 feet of water mains, some of which dated from the late 1800s; and began a galvanized service line replacement project. We also kicked-off planning and identified a firm to work on our long-term facilities replacement plan. You can learn more about this project on our Water Treatment Plant Facilities Plan website. For this project, we plan to build a pilot plant to test new technologies and ensure reliability before we build full scale. In the coming year we also plan to update our Surface Water Intake Protection Plan and Wellhead Protection Plan. These are important projects to ensure that our source waters are protected from contamination. Additional upcoming projects include replacement of our lab’s information management system which is responsible for tracking more than 200,000 sample results per year and replacement of valves and piping at the city’s raw water pumping station that is responsible for more than 80% of the water delivered to Ann Arbor water system customers.

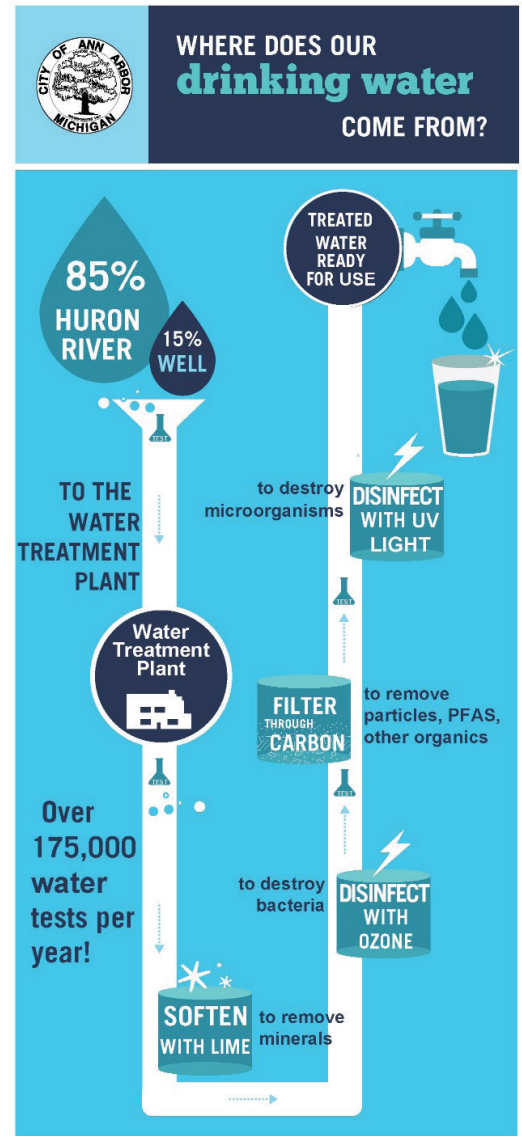
In other exciting news, in the next few months we will begin to roll out a new look and feel that encompasses all water services and streamlines our water-related communications. This modern identity and unified focus will help to strengthen our collective efforts to ensure the public health of Greater Ann Arbor by providing an integrated water system that protects and preserves the Huron River basin with high-quality drinking water, advanced wastewater recovery and robust stormwater management. Stay tuned – we can’t wait to unveil the details to you soon!

If you have questions about this report, or water quality in the City of Ann Arbor, please contact us at 734.794.6426, email [water@a2gov.org](mailto:water@a2gov.org) or visit [www.QualityWaterMatters.org](http://www.QualityWaterMatters.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 2021 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 2021. The information provided is a snapshot of the quality of the water we provided to you in 2021. Included are details about where your water comes from, what it contains, and how it compares to U.S. EPA and State standards.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up 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.

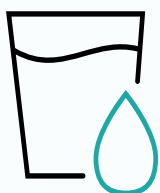
*Contaminants that may be present in source water include:*

- 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.

Ann Arbor's water treatment plant has multiple barriers of defense against each class of potential contaminants. For example, we have 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.

### **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 the plan will be updated in the coming year. Implementation of this plan continues through system-wide data collection and monitoring, community staff training, contingency planning, public outreach, and vegetation management.



The City of Ann Arbor's source water is comprised of both surface and ground water sources. About 85% of the water supply comes from the Huron River with the remaining 15% provided by multiple wells. The water from both sources is blended at the Water Treatment Plant.

# 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 2021. 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, 2021.

## Regulated Contaminants Detected (abbreviations and definitions on page 7)

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>Per- and polyfluoroalkyl substances (PFAS)</b>						
Perfluorohexanoic acid (PFHxA, ppt)	11.0	3.8 - 11.0	400,000	N/A	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorobutane sulfonic acid (PFBS, ppt)	2.2	<2.0 - 2.2	420	N/A	No	Discharge and waste from industrial facilities; stain-resistant treatments
<b>Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors</b>						
Bromate (ppb)	3.8 <sup>1</sup>	<1.0 - 10.0	10	0	No	Byproduct of ozone disinfection
Chloramines (ppm) <sup>2</sup>	2.6 <sup>1</sup>	0.9 - 3.3	MRDL: 4	MRDLG: 4	No	Disinfectant added at Water Plant
Haloacetic Acids (HAA5, ppb) <sup>2,3</sup>	9 <sup>3</sup>	2.3 - 17.3	60	N/A	No	Byproduct of drinking water disinfection
Total Organic Carbon (TOC)	56% removed <sup>4</sup>	48 - 61% removed	TT: 25% minimum removal	N/A	No	Naturally present in the environment
Total Trihalomethanes (TTHM, ppb) <sup>2,3</sup>	5 <sup>3</sup>	<1.0 - 8.5	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)	18	N/A	2000	2000	No	Erosion of natural deposits; discharge of drilling wastes; discharge of metal refineries
Fluoride (ppm)	0.76	0.14 - 0.76	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	0.8	0.3 - 0.8	10	1	No	Runoff from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (ppm)	0.091	<0.025 - 0.091	1	1	No	Runoff from fertilizer use; leaching from septic tanks and sewage
<b>Microbiological Contaminants</b>						
Turbidity (NTU)	0.15	100% of samples ≤ 0.3 NTU	1 NTU and 95% of samples ≤ 0.3 NTU	N/A	No	Naturally present in the environment
<b>2020 Lead and Copper Results from Customer Faucets</b>						
Parameter	Customer taps 90th percentile <sup>5</sup>	Customer taps Range	Action level <sup>6</sup>	MCLG	Violation (Yes/No)	Typical Source of Contaminant
Copper (ppb) <sup>6</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>6</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> 90% of samples taken from customer taps were less than or equal to this level

<sup>6</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

## 2021 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)	65	46 - 91	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)	<2.0	<2.0	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> )	64	44 - 121
Aluminum (ppm)	0.016	N/A
Ammonia as N (ppm)	<0.10	<0.10 - 0.15
Arsenic (ppb)	<1.0	N/A
Calcium (ppm)	32	22 - 42
Chloride (ppm)	117	82 - 171
Chromium (total) (ppm)	<2.0	N/A
Conductivity (µmhos/cm)	613	485 - 788
Hardness (CaCO <sub>3</sub> ) (ppm)	125	92 - 202
Hardness (CaCO <sub>3</sub> ) (gpg)	7.3	5.4 - 11.8
Iron (ppm)	<0.025	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)	13	6 - 20
Manganese (ppm)	<2.7	<2.7 - 3.1
Mercury (ppb)	<0.20	N/A
Non-Carbonate Hardness (ppm)	61	15 - 108
pH (S.U.)	9.3	9.0 - 9.9
Phosphorus (total, ppm)	0.24	0.09 - 0.31
Potassium (ppm)	3.7	N/A
Sulfate (ppm)	51	35 - 73
Temperature (°Celsius)	15.7	6.3 - 32.0
Total Solids (ppm)	364	293 - 445
Zinc (ppb)	<5.0	N/A
Nitrite in Distribution (ppm)	0.061	<0.025 - 0.45



## 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 concentrations of PFOS and PFOA below the quantification limits and far below the city's target of less than 10 parts per trillion, more restrictive than the most stringent water quality levels established in the U.S. or around the world. Samples collected by the city and analyzed by an independent lab each month have shown PFAS in Ann Arbor drinking water at levels significantly below the Health Advisory Level established by EPA and below the Maximum Contaminant Levels (MCLs) that the State of Michigan adopted on Aug. 3, 2020. 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. 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 <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 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. After three years, attempts at reaching a negotiated settlement that is agreeable to all parties were not successful. While there is still active litigation in Washtenaw County Circuit Court as part of a suit brought by the state against Gelman, Ann Arbor City Council voted to seek EPA intervention in the clean-up. In April 2021, EGLE requested that EPA reinstate assessment of the Gelman site for the National Priorities Listing (NPL) process. EPA identified a contractor, Weston Solutions, to conduct the assessment, and the contractor has begun to review the site and prepare a sampling plan. 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). Analytical test results for both the city's source and finished drinking water can be found at [www.QualityWaterMatters.org](http://www.QualityWaterMatters.org).

..... see the next page for additional information

# 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 cryptosporidiosis, an abdominal infection. 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. This new technology was commissioned in summer 2020 and 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:** Micromhos per centimeter (a measure of electrical conductivity).

### Stay drinking water informed



We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at our website [www.QualityWaterMatters.org](http://www.QualityWaterMatters.org).

The city offers multiple ways to stay informed about what is in your drinking water and how the city keeps it safe. Check out the information below and resources at [www.QualityWaterMatters.org](http://www.QualityWaterMatters.org).

- Sign up for Quality Water Matters [email notifications](#).
- Read our monthly newsletter, Quality Water Matters, to obtain information regularly about your water and public participation opportunities.
- Watch the Water Treatment Plant video.
- Request a virtual Water Treatment Plant tour.
- Email [water@a2gov.org](mailto:water@a2gov.org) or call 734.794.6426 with your water questions.

Printed copies of this report are available. 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.

## Water Meter and Galvanized Line Replacement Updates

Currently, the City of Ann Arbor has three important water upgrade projects in the works: water meter replacements, water line inspections, and galvanized service line replacements. These three projects will help us ensure compliance with the State of Michigan's updated Lead and Copper rule.

Michigan's updated Lead and Copper Rule requires communities to locate galvanized iron service lines previously connected to lead and plan for their replacement. Galvanized iron pipes can collect lead and when disturbed, such as when utility or road work is performed, cause a release of lead into drinking water.

Currently, the City of Ann Arbor Public Works Unit is in the process of completing a materials inventory of the public and privately owned portions of water service lines. 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.

### Online Inventory Map

A [map](#) is available for the public to view the materials inventory information. As service line material is verified, the map will be updated to reflect current data. The map also reflects those lines that have been determined to be eligible for replacement. Once materials are verified, the city will know exactly how many lines it needs to replace. Residents who have service lines eligible for replacement will receive a letter in the mail.

### 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.

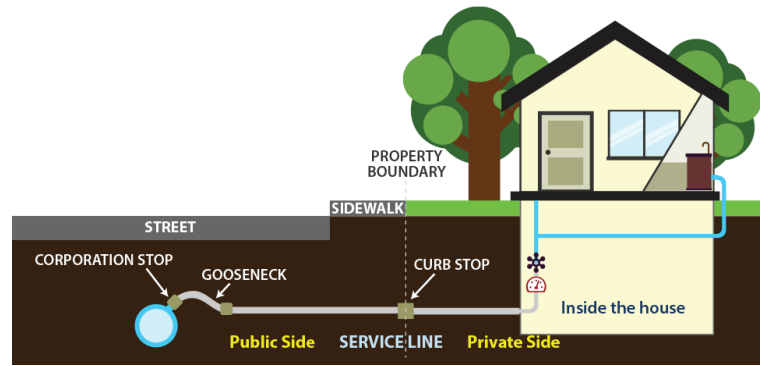
If you are interested, please visit [www.a2gov.org/lead/sample](http://www.a2gov.org/lead/sample) or contact the Water Treatment Plant at 734.994.2840 to arrange pick-up of a testing kit.

Other useful information resources include:

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



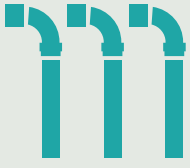
### Galvanized service line replacements

In 2021, the City of Ann Arbor began replacement of eligible galvanized service lines and will continue replacements at a rate of at least 5% per year. 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 and to link to the map, visit [www.a2gov.org/lcr](http://www.a2gov.org/lcr).



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).

## 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

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.



Water Main Replacement Project



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

*With special thanks to our Water Champions!*



Systems Planning Engineer **Troy Baughman** was selected for his tireless work managing the city's meter replacement project.



Customer Service Supervisor, **Crystal Allen** was named for her continued dedication to successfully managing the city's customer service team.



**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.



**Mike LaCroix** is a Water Utility Supervisor at the city's Water Treatment Plant, who takes great pride in operating the plant and providing clean and safe water to the local community.



**Jake Girbach** has worked in public works for 17 years, spending time in solid waste, street maintenance and, for the last several years, in water distribution system maintenance.



**Rich Taulbee** has worked in the City of Ann Arbor Public Works Department for eight years, first as a sewer maintenance technician and recently as a water meter and service technician.



**Conuetta Wright** has worked in the water and wastewater field for 21 years, the last 11 years have been with the City of Ann Arbor.



**Lea Monaghan** works as an environmental lab analyst, conducting analyses for both the drinking water and wastewater treatment plants that are critical for regulatory compliance and optimization of plant processes.



**Michael Culpepper** has served the Ann Arbor community for the past 20 years as an Operator and Supervisor at the city's Water Treatment Plant.

# KIDS' ACTIVITIES

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

This is a zigzag word search puzzle. Words go left, right, up and down not diagonally and can bend at a right angle.

There are no unused letters in the grid, every letter is used only once.

Find all the words from the word list

- |         |              |
|---------|--------------|
| BAY     | POOL         |
| CANAL   | PUDDLE       |
| CREEK   | RESERVOIR    |
| ESTUARY | <b>RIVER</b> |
| GEYSER  | SEA          |
| HARBOR  | SPRING       |
| LAKE    | STREAM       |
| OCEAN   | WATERFALL    |
| POND    | WETLAND      |

Answer:

M	A	M	R	E	A	M	R	E	S	T	R	E	A	M
R	A	R	E	R	R	R	R	R	R	R	R	R	R	R
Y	A	E	O	O	A	S	P	O	Y	Y	Y	Y	Y	
D	A	N	D	A	N	D	A	N	D	A	N	D	A	N
N	E	G	N	E	S	E	G	N	E	S	E	G	N	E
I	E	R	K	E	I	E	R	K	E	I	E	R	K	E
R	P	B	A	Y	E	R	K	E	I	R	P	B	A	Y
R	E	R	C	A	N	R	I	V	W	E	R	C	A	N
P	R	P	B	A	P	O	O	L	T	R	P	B	A	P
S	A	O	L	L	L	A	F	L	C	S	A	O	L	L
D	A	N	D	A	N	D	A	N	D	A	N	D	A	N