



Ann Arbor Charter Township &
Superior Charter Township
Utilities Department

2022 Drinking Water Quality Report

Summary of Your Water from January 1 – December 31, 2022

Protecting Safe Drinking Water



Clean, fresh water that tastes good - that's what you expect when you drink water, and that's what Ann Arbor Charter Township Utilities Department delivers right to your tap. In 2022, we continued to supply high-quality water. Our committed and experienced staff continued to meet all water regulations, providing the exceptional tap water expected by our customers. This report explains where your drinking water comes from, what is in it, how we keep it safe, and how it compares to the EPA and State of Michigan standards.

We take great pride in meeting and surpassing the requirements of all federal and state drinking water regulations. We can ensure the highest quality tap water through voluntary programs that improve our organization and establish more stringent water quality goals. To achieve excellence, our water utility professionals, in cooperation with the City of Ann Arbor, perform 175,000 water quality tests annually.

While it is an honor to be known for great-tasting water, perhaps the most critical aspect is the assurance of a clean water source, now and future. The Huron River plays a vital role in the quality of life for our community. It provides recreation, enchanting scenes, and, more importantly, serves as our primary source of fresh water. It is our privilege to be stewards of this resource on your behalf. Our staff collaboratively works with the Huron River Watershed Council to champion efforts to protect it, as they understand the critical nature that this water supply plays.

Throughout the last year, our outstanding staff worked exhaustively to ensure that our system remained in tip-top shape by instituting a leak detection program, operating all primary valves, changing meters to increase efficiency, and updating the cross-connection plan. These measures allow us to deliver the safest, most reliable, and most delicious drinking water to your home or business.

Thank you for taking the time to review this Drinking Water Quality Report. It is our pleasure to serve you.

Sincerely,

Rick Judkins
Ann Arbor Township

Sincerely,

Ricky Harding
Superior Township

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Where Does Our Tap Water Come From?

Ann Arbor Charter Township receives its water supply from the City of Ann Arbor. 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 the sources is blended at the water treatment plant. Since the City of Ann Arbor uses a surface water supply, the Huron River, USEPA and Michigan Department of Environmental Quality (DEQ) regulations require it to be treated, filtered, and disinfected to ensure that any harmful substances are removed. When the treatment is complete in the City of Ann Arbor, the water is pumped to Ann Arbor Charter Township, where we pump the water to homes, schools and businesses in Ann Arbor Charter Township and a portion of Superior Charter Township.



Do I Need to Take Any Special Precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 and the Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the **Safe Water Drinking Hotline: (800) 426-4791**.

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 to 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 Ann Arbor's system. To request a copy of the assessment, call (734) 794-6320.

In 2017, Ann Arbor 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. Since Ann Arbor Charter Township receives its water from the city, their SWIPP applies to our system. If you have further questions about the city's SWIPP, please visit the city's website at: www.a2gov.org/departments/systems-planning/programs/Pages/SWIPP.aspx

PUBLIC NOTICE

TO ANN ARBOR CHARTER TOWNSHIP AND SUPERIOR CHARTER TOWNSHIP PROPERTY OWNERS OR OCCUPANTS:

If you experience an overflow or backup of the sewage disposal system or storm water system, you must file a written claim with Ann Arbor OR Superior Charter Township within 45 days after the overflow or backup was discovered. Notice must be mailed to the Utilities Department Director at 3792 Pontiac Trail, Ann Arbor, Michigan 48105, (734) 663-3418 for Ann Arbor Charter Township or to the Utilities Department at 575 E. Clark Road, Ypsilanti, Michigan. 48198, (734) 480-5500 for Superior Charter Township. Failure to provide the required notice will prevent recovery of damages. Contact Ann Arbor or Superior Charter Township immediately upon discovery of an overflow or backup to obtain a claim form. While you do not need to use the Township's form to file a written claim, it should include your name and address, the address of the affected property, the dates of the overflow or backup, the date the backup or overflow was discovered, and a brief description of the overflow or backup.



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, UV 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 safe, consistent water 24/7.

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, 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 which limit the levels of certain contaminants in the water provided by public water systems. FDA regulations establish limits for contamination 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 contaminants 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 or visiting www.epa.gov/safewater.

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 stormwater 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 stormwater 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 stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

Contaminants of Concern

Lead:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Ann Arbor Township Utilities Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. Ann Arbor Township has no known homes with lead service lines, but some of our customers do have lead components to their internal plumbing. Homes with copper 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 at or at <http://www.epa.gov/safewater/lead>.

Cryptosporidium:

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. 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 life-threatening illness and are encouraged to consult their doctor regarding appropriate precautions to take to avoid 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, UV disinfection has been added to the water treatment process as of the summer of 2020 and is the best available technology to inactivate *Cryptosporidium*.

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 affected communities and the state push Gelman to delineate, contain and clean up its pollution. While there is still active legislation in Washtenaw County Circuit Court as part of a suit brought by the state against Gelman, in 2021 EGLE requested that the 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. Information also is available on the EPA's website at www.epa.gov/mi/gelman-sciences.

DEFINITIONS:

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

GPG-Grains per Gallon: A unit of water hardness defined as 1 grain of calcium carbonate dissolved in 1 US gallon of water.

J: Estimated concentration above the method detection limit and below the reporting limit.

MCL-Maximum Contaminant Level: The level of a contaminant that is allowed in drinking water. They are set as close to the MCLG's as feasible.

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

MRDL-Maximum Residual Disinfectant Level: The highest level of disinfectant allowed in drinking water.

MRDLG-Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health.

n/a: not applicable

ND: Not detected

NTU-Nephelometric Turbidity Units: A measure of cloudiness of water

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

ppm: parts per million or milligrams per liter - or one ounce in 7,350 gallons of water.

ppb: parts per billion or micrograms per liter - or one ounce in 7,350,000 gallons of water.

ppt: parts per trillion or micrograms per liter - or one ounce in 7,350,000,000 gallons of water.

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

Ann Arbor Charter Township is committed to providing exceptional water quality. In coordination with the City of Ann Arbor, we routinely monitor for contaminants in your drinking water according to federal and State standards, and we conduct additional monitoring beyond which is required. This report includes information on all regulated drinking water parameters during 2022. The presence of contaminants does not necessarily indicate the water poses a health risk. The State allows us to monitor certain contaminants less than once per year because the concentration of these contaminants is not expected to vary significantly from year to year.

REGULATED CONTAMINANTS DETECTED

Parameter Detected	Your Water Results		Regulatory Requirements		Typical Source of Contamination
	Highest Level Detected	Results Range	EPA/EGLE Limit MCL, TT, or MRDL	EPA Goal MCLG or MRDLG	
Per- and polyfluoroalkyl substances (PFAS)					
Perfluorohexanoic Acid (PFHxA)	5.9 ppt ¹	2.1 – 6.0 ppt	400,000 ppt	n/a	Firefighting foam; discharge and waste from industrial facilities
Perfluorooctane Sulfonic Acid (PFOS)	<1.9 ppt ¹	<1.9 – 2.0 ppt	420 ppt	n/a	Discharge and waste from industrial facilities; stain-resistant treatments
Disinfection By-products, Disinfectant Residuals, and Disinfection Byproduct Precursors					
Bromate	4.6 ppb ¹	<1.0 – 9.8 ppb	10 ppb	0 ppb	By-product of ozone disinfection
Chloramines ²	2.6 ppm ¹	0.4 – 3.5 ppm	(MRDL) 4 ppm	(MRDLG) 4 ppm	Disinfectant added at water plant
Haloacetic Acids (HAA5) ^{2,3}	8.7 ppb ³	6.5 – 8.7 ppb	60 ppb	n/a	By-product of drinking water disinfection
Total Organic Carbon (TOC)	57% Removed ⁴	49% - 65% removed	(TT) 25% minimum removal	n/a	Naturally present in the environment
Total Trihalomethanes (TTHM) ^{2,3}	6.8 ppb ³	2.4 – 6.8 ppb	80 ppb	n/a	By-product of drinking water disinfection
Radioactive Contaminants (tested in 2020)					
Gross Alpha	0.933 ± 0.47 pCi/L	n/a	15 pCi/L	0 pCi/L	Erosion of natural deposits
Radium 226 & 228	2.0 ± 0.85 pCi/L	n/a	5 pCi/L	0 pCi/L	Erosion of natural deposits
Inorganic Contaminants					
Barium	19 ppb	n/a	2000 ppb	2000 ppb	Erosion of natural deposits; Discharge of drilling wastes; Discharge of metal refineries
Fluoride	0.89 ppm	0.21 – 0.89	4 ppm	4 ppm	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate	0.8 ppm	0.2 – 0.8 ppm	10 ppm	1 ppm	Run-off from fertilizer use; leaching from septic tanks & sewage; natural deposit
Nitrite	0.14 ppm	<0.025 – 0.140 ppm	1 ppm	1 ppm	Run-off from fertilizer use; leaching from septic tanks and sewage

¹ highest running annual average² measured in the Distribution System³ highest locational running annual average⁴ average percent removal

REGULATED CONTAMINANTS DETECTED (continued)

Microbiological Contaminants					
Turbidity	0.28 NTU	100% of samples ≤0.3 NTU	1 NTU and 95% of samples ≤0.3 NTU	n/a	Naturally present in the environment
2022 Lead and Copper Results from Customer Faucets (Lead and Copper are regulated by action levels)					
Parameter	Customer Taps 90 th Percentile	Customer Taps Range	Action Level	MCLG	Typical Source of Contamination
Copper – 2022	90 ppb	56 – 90 ppb	1300 ppb	1300 ppb	Corrosion of household plumbing systems; Erosion of natural deposits
Lead – 2022	<1.0 ppb	<1.0 ppb	15 ppb	0 ppb	Lead service lines, corrosion of household plumbing including fittings and fixtures; erosion of natural deposits

2022 SPECIAL MONITORING

Detected Contaminants	Your Water Results		Likely Source of Contamination
	Average Level Detected	Range	
1,4-Dioxane	<0.12 ppb	<0.12 ppb	Groundwater contamination from manufacturing process and landfills
N-Nitrosodimethylamine (NDMA)	<10 ppb	n/a	By-product of disinfection
Perchlorate	<4.00 ppb	n/a	Nitrate fertilizer runoff; contamination from industrial manufacturing process
Sodium	66 ppm	51 – 82 ppm	Erosion of natural deposits; road salt and water softeners
Perfluorooctanoic Acid (PFOA), Perfluorohexane Sulfonic Acid (PFHxS), Hexafluoropropylene Oxide Dimer Acid (HFPO-DA), Perfluorononanoic Acid (PFNA)	<1.9 ppt	<1.9 ppt	Firefighting foam; discharge and waste from industrial facilities; discharge from electroplating facilities; stain-resistant treatments

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 did not 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 us to supply you with 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 Township 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.

OTHER WATER QUALITY PARAMETERS OF INTEREST

Parameter	Your Water Results	
	Average Level Detected	Range
Alkalinity, total as CaCO ₃	52.5 ppm	40 - 60 ppm
Aluminum	0.018 ppm	n/a
Ammonia as N	<0.10 ppm	<0.10–0.16 ppm
Arsenic	<1.0 ppb	n/a
Calcium	23.5 ppm	19 – 29 ppm
Chloride	115 ppm	110 – 120 ppm
Chromium (total)	<2.0 ppm	n/a
Conductivity (units μmhos/cm)	598	501 – 710
Hardness (CaCO ₃)	121 ppm	90 – 170 ppm
	7 gpg	5.3 – 9.9 gpg
Iron	<0.020 ppm	n/a
Lead (at Water Treatment Plant tap)	<1.0 ppb	n/a

Parameter	Your Water Results	
	Average Level Detected	Range
Magnesium	14 ppm	6 – 21 ppm
Manganese	<0.020 ppm	<0.020 ppm
Mercury	<0.20 ppb	n/a
Non-Carbonate Hardness	62 ppm	36 – 100 ppm
pH	9.3 S.U.	9.0 – 9.6 S.U.
Phosphorus, total	0.26 ppm	0.16-0.36 ppm
Potassium	3.1 ppm	n/a
Sulfate	45.75 ppm	38 – 52 ppm
Temperature	15.3 °C	5.9 – 25.6 °C
Total Solids	357 ppm	318 – 447 ppm
Zinc	<5.0 ppb	n/a
Nitrite in distribution	0.063 ppm	<0.025 – 0.23 ppm



Stay Informed and Provide Input



The USEPA requires water utilities departments to provide certain information within this report. That information is generic and may or may not apply to the drinking water in Ann Arbor or Superior Charter Township. It is very important to us that this report is clear, easy to understand and provides the information that our customers find useful. Therefore, your input is appreciated. If you have any comments or ideas, we will welcome them. You may contact us at (734) 663-3418 or email rjudkins@aatwp.org

Get Involved



The Utilities Director regularly attends the scheduled Board of Trustees meetings where the water system is occasionally discussed. The public is welcome and encouraged to attend to learn more about their water system or to discuss any concerns they may have.

The Ann Arbor Charter Township Board of Trustees meets on the third Monday of each month. The meetings are open to the public, and unless announced otherwise, are at 7:30 PM in the Ann Arbor Charter Township Hall located at 3792 Pontiac Trail or via Zoom video conferencing. Contact rbasch@aatwp.org for more information.

The Superior Charter Township Board of Trustees meets on the first and third Monday of each month. The meetings are open to the public, and unless announced otherwise, are at 7:30 PM in the Superior Charter Township Hall located at 3040 N. Prospect Road.

Automatic Utility Bill Payment Program

Ann Arbor Charter Township is offering a convenient, new option to pay your sewer and/or water bills. Should you choose this option, no more writing checks for your quarterly utility payments!

If signed up, you will get your statement as before. Under this option, we debit the balance owed from your savings or checking account on the due date. If the due date falls on a weekend or holiday, your payment will be debited on the next business day. This is a routine banking process, and most people consider it safer than sending checks.

If interested in applying for this service, please e-mail treasurer@aatwp.org to receive an application form.

Additional Information and Contacts

To receive additional copies of this report or if you have any questions about this report or would like to know anything further about your water and/or water utilities, please feel free to call us:

Rick Judkins
Utilities Director
(734) 663-3418
rjudkins@aatwp.org

OR

Rickey Harding
Superior Township
Superintendent
(734) 480-5500
utilitydept@superior-twp.org

In the event of an emergency, such as water main breaks, emergency water turn-offs and sanitary or storm sewer back-ups, please call:

DURING NORMAL BUSINESS HOURS: (734) 663-3418

AFTER HOURS EMERGENCY: (734) 663-0995

<https://aatwp.org/township-government/departments/utilities/>

<https://superiortownship.org/departments/utilities/>