

2017 Water Quality Report for City of St. Louis

This report covers the drinking water quality for the City of St. Louis for the 2017 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2017. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Your water comes from six groundwater wells, ranging in depth from 105 feet to 162.5 feet, and the Pine River. The Gratiot Area Water Authority (GAWA) treats the blended well/river source prior to pumping into the City's water distribution system. The State performed an assessment of our source water to determine the susceptibility or the relative potential of contamination in 2003. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based on geologic sensitivity, well construction, water chemistry and contamination sources. GAWA well #7 was ranked "moderately low", while well #1 and the Pine River were ranked "high" for having a high degree of sensitivity to potential contamination. The new GAWA wells, #8, #9, #10 and #11 were installed after the assessment was completed and are currently not ranked.

There are no significant sources of contamination to GAWA's well fields. Both partner cities of GAWA have adopted and Implemented Wellhead Protection plans to further protect GAWA's well fields from potential contamination sources.

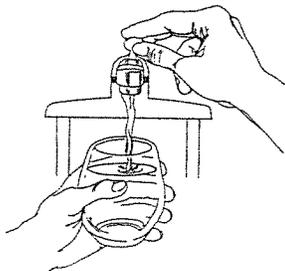
The Pine River is susceptible to contamination by illegal dumping and runoff. Daily monitoring of the river water entering the treatment plant is performed by plant operators.

Included in this report is the analysis of water supplied by GAWA Water Treatment Plant in Alma, Michigan and all required tests of the St. Louis water distribution system. A full copy of GAWA's 2017 CCR for the City of Alma is available online or at Alma or St. Louis city halls.

If you would like to know more about the St. Louis or GAWA report(s), please contact Keith Risdon, St. Louis Utilities Director @ 989-681-2613 or Bill Pilmore, GAWA Plant Superintendent @ 989-463-8394.

- **Contaminants and their presence in water:** 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 (800-426-4791)**.
 - **Vulnerability of sub-populations:** 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 systems 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 (800-426-4791).
 - **Sources of drinking water:** The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from wells and surface 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.
- 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 and residential uses.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
- **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.



In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2017 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2017. 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 of the data is representative of the water quality, but some are more than one year old.

Terms and abbreviations used below:

- **Maximum Contaminant Level Goal (MCLG):** 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.
- **Maximum Contaminant Level (MCL):** 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.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** 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.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **N/A:** Not applicable **ND:** not detectable at testing limit **ppb:** parts per billion or micrograms per liter **ppm:** parts per million or milligrams per liter **pCi/l:** picocuries per liter (a measure of radioactivity).
- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Level 1 Assessment:** A study of the water supply to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **Level 2 Assessment:** A very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
- **NTU:** Nephelometric turbidity units.

GAWA Water Supply results for water supplied January 1, 2017 – December 31, 2017

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Inorganic Contaminants							
Arsenic (ppb)	10	0	2.6	2.1-2.9	2017	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Fluoride (ppm)	4	4	0.71	0.44-1.04	2017	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Sodium ¹ (ppm)	N/A	N/A	50		2017	NO	Erosion of natural deposits.
Chlorine ² (ppm)	4	4	0.45	0.04-1.49	2017	NO	Water additive used to control microbes

Nephelometric turbidity units	95% of 4 hr compliance periods must be less than 034 NTUs		100% < 0.34 ntu	0.04 – 0.22	2017	NO	Measure of the cloudiness of water due to soil runoff. Used to monitor effectiveness of filtration system.
Disinfectants & Disinfection By-Products							
TTHM - Total Trihalomethanes (ppb)	80	N/A	47	33-75	2017	NO	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	5.88	5-8	2017	NO	Byproduct of drinking water disinfection
Dalapon (ppb)	200	200	0.41	N/A	2017	NO	Herbicide runoff
Radioactive Contaminants							
Combined radium (pCi/L)	5	0	0.1	N/A	2013	NO	Erosion of natural deposits
Inorganic Contaminant Subject to AL	AL	MCLG	Your Water ⁴	Year Sampled	# of Samples Above AL	Does System Exceed AL? Yes / No	Typical Source of Contaminant
Lead (ppb)	15	0	3	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.2	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Special Monitoring and Unregulated Contaminants *			Level Detected	Year Sampled	Typical Source		
Chloride			31 ppm	2017	Erosion of natural deposits		
Iron			<0.1 ppm	2017	Erosion of natural deposits		
Sulfate			160 ppm	2017	Erosion of natural deposits		

¹ Sodium is not a regulated contaminant.

² The chlorine "Level Detected" was calculated using a running annual average.

³ *E. coli* MCL violation occurs if: (1) routine and repeat samples total coliform-positive and either is *E. coli*-positive, or (2) supply fails to take all required repeat samples following *E. coli*-positive routine sample, or (3) supply fails to analyze total coliform-positive repeat sample for *E. coli*.

⁴ 90 percent of the samples collected were at or below the level reported for our water.

Information about 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. The City of St. Louis is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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>.

Monitoring and Reporting to the DEQ Requirements: Monitoring Requirements Not Met for the City of St. Louis.

“We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During June 1, 2017, to September 30, 2017, we did not monitor lead and copper and therefore, cannot be sure of the quality of your drinking water during this time. This violation **does not** pose a threat to the quality of the supply’s water.”

What should I do? There is nothing you need to do. This is not an emergency. You do not need to boil water or use an alternative source of water. Even though this is not an emergency, as our customers, you have the right to know what happened and what we are doing to correct the situation.

What happened? What is being done? Due to a change in personnel and in the filing and tracking system being used at the City, the required number of sample sites being used by the City was mis-recorded. The City is required to sample 40 sites annually for lead and copper. With the midyear change in personnel and the filing/tracking system, the number of tested sites, thought to be 41, inadvertently was only 37 once the reports were filed with the MDEQ. As the testing period had expired at the time of the filing, the City was not allowed to collect the 3 additional samples which we were short.

While the City is required to collect all 40 samples between June 1 and September 1 of each calendar year and only collected 37 for that testing period in 2017, we feel that our sampling efforts have been successful in monitoring the lead and copper levels in our water supply. Since the City has been on GAWA water our 90th percentage calculation has steadily been reduced. Had the three additional samples been obtained, our final 90th percentage value could have been lower than the recorded “3” or at worst case, a “5”. A value of “5” would still be below the AL limit of 15 and match our 2016 90th percentile.

In an effort to reduce the possibility of this type of error occurring again, the City has made a review of all available water service line records and has put in place a filing/recording system for better tracking the eligible collection sites. As the information is collected, the data will be placed in a spreadsheet along with pertinent data for filing with the MDEQ in a timely fashion.

Monitor Table:

Contaminants	Required sampling frequency	Number of samples taken	Collection period	2018 Collection period (40 samples to be collected)
Lead and Copper	40 samples every year	37	6/1/17 - 9-30-17	6/1/18 – 9-30-18

For more information, please contact Mr. Keith Risdon, Director of Public Services, at 989-681-2613

“Please share this information with all other 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 or mail.

This notice is being provide to you via the 2017 Consumers Confidence Report by the City of St. Louis.

CERTIFICATION

WSSN: 06320

I certify that this water supply has fully complied with the public notification regulations in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature: Keith W. Risdon **Title:** DIRECTOR OF PUBLIC SERVICES **Dated Distributed:** 6/12/18

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 St. Louis City Hall, 300 North Mill Street, 48880 and on the City's web site at www.stlouismi.com. This report will not be sent to you unless requested.

We invite public participation in decisions that affect drinking water quality. If you have questions about the quality of your water supply or wish to be involved with the decisions concerning your water supply, please attend any regular City Council meeting at St. Louis City Hall. The meeting dates are the first and third Tuesdays of each month at 6:00 p.m.

For more information about your water, or the contents of this report, contact. For more information about your water or the contents of this report, please contact Keith Risdon at 989-681-2613 or at krisdon@stlouismi.com. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.