

City of Livonia 2024 Water Quality Report



Dear Water Customer,

We are happy to present the City of Livonia Calendar Year 2024 Water Quality Report. We developed this report to share important information about your drinking water, in compliance with Federal requirements of the Safe Drinking Water Act.

In 2024, our annual testing of tap water in homes for lead and copper found that four homes tested over the action level exceedance of 15 parts per billion (ppb) of lead, which caused our 90th percentile value to be 17 (ppb) for the water system. These test results triggered new sampling protocols, educational outreach to customers, and service line replacement, in compliance with the Michigan Department of Environment, Great Lakes and Energy.

We continue to work actively to identify all residential lead service lines and change them out. Livonia water customers who would like their service line assessed or to learn more about testing your water service line for lead should visit CheckYourPipesLivonia.org.

Knowledge is power, and this document was designed to bring you the knowledge you need about the water you drink every day. You will learn about the quality of your water, the source of your drinking water, how we manage risks to our water supply, and the water treatment process. The Michigan Department of Environment, Great Lakes & Energy is responsible for overseeing the operation of municipal water systems.

In addition, Livonia employees work hard every day to continue delivering the safest and highest quality water to all our customers, in conjunction with our supplier, the Great Lakes Water Authority.

Thank you for reading this report. If you have any questions, please contact Joey Schuetz, Water and Sewer Manager, at (734) 466-2632.

Sincerely,

A handwritten signature in black ink that reads "Maureen Miller Prosser".

Mayor, City of Livonia

Safe Drinking Water Act

Under the Safe Drinking Water Act (SDWA), the United States Environmental Protection Agency (USEPA) is responsible for setting national limits for hundreds of substances in drinking water and also specified various treatments that water systems must use to remove these substances. Similarly, Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Each agency continually monitors these substances and reports directly to the USEPA if they were detected in the drinking water. USEPA uses this data to ensure that consumers are receiving clean water and verify that states are enforcing the laws that regulate drinking water.

How Will I Know If There Is A Problem With My Water?

If the amount of a contaminant exceeds a predetermined safe level in your drinking water (MCL, Action Level, etc.) the City of Livonia Department of Public Works will notify you via newspapers, radio, TV, and other means as soon as possible. With the notification, you will be instructed on what appropriate actions you can take to protect you and your family's

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health. For information on the City of Livonia notifications via Nixle and social media sites, go to the City's website <https://livonia.gov/1696/Social-Media>.

Substances Expected To Be In Drinking 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 Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791). The sources of drinking water (both tap water 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. 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 organics, which are byproducts 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.

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

People With Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those 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 (800-426-4791).

Naturally Occurring Bacteria

The simple fact is bacteria and other microorganisms inhabit our world. They can be found all around us; in our food; on our skin; in our bodies; and in the air, soil, and water. Some are harmful to us, and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout 2024, the City of Livonia tested 1200 samples (samples every month) for coliform bacteria. In the entire year, there were no samples found to contain these nuisance bacteria.



Cryptosporidium

GLWA voluntarily monitors our source water for the presence of Cryptosporidium and Giardia. Current test methods do not enable us to determine if these organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life-threatening illnesses. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. Cryptosporidium must be ingested for it to cause disease and may be passed through other means than drinking water. Surface water treatment systems like GLWA must provide treatment so that 99.9% Giardia is removed or inactivated.

LEAD

If present, Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The city of Livonia is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for at least 5 minutes to flush water from both your home plumbing and the lead service line. If you are concerned about lead in your water and wish to have your water tested, contact City of Livonia Joey Schuetz, Water and Sewer Manager, at (734) 466-2632 for available resources. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>. There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

The City of Livonia and the GLWA are committed to meeting state and federal water quality standards including the Lead and Copper Rule. With the Great Lakes as our water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to our community. The City of Livonia operates the system of water mains that carry this water to your home's service line. This year's Water Quality Report highlights the performance of the GLWA and City of Livonia

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water professionals in delivering some of the nation’s best drinking water. Together, we remain committed to protecting public health and maintaining open communication with the public about our drinking water.

The City of Livonia is in the process of performing a material inventory of water service lines. A service line includes any section of pipe, both public and private, from the water main to the building plumbing at the water meter or 18 inches inside the building, whichever is shorter. The city did not historically record the materials used on the privately-owned pipe segments of service lines. The process of collecting data to update the service line material inventory is ongoing.

Water Service Line inventory status 2024		
Lead Service Lines	Lines of Unknown Material	Total Number of Service Lines
24	15,352	39,011



Information on Source Water

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, in the U.S. and parts of the Thames River, Little River, Turkey Creek and Sydenham watersheds in Canada. The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Great Lakes Water Authority (GLWA), and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is on a seven-tiered scale from very low to very high based primarily on geologic sensitivity, water chemistry, and contaminant sources. The report described GLWA's Detroit River intakes as highly susceptible to potential contamination. GLWA's Springwell's water treatment plant that draws water from the Detroit River has historically provided satisfactory treatment and meets drinking water standards.

GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA participates in a National Pollutant Discharge Elimination system permit discharge program and has an emergency response management plan. GLWA has an updated Surface Water Intake Protection plan for the Belle Isle intake. The plan has seven elements that include: roles and duties of government units and water supply agencies, delineation of a source water protection areas, identification of potential sources of contamination, management approaches for protection, contingency plans, siting of new water sources, public participation, and public education activities. If you would like to know more information about the Source Water Assessment Report, please, contact GLWA at (313 926-8127).

How is The Water Treated?

The water treatment plant operates 24 hours a day, seven days a week. The treatment process begins with disinfecting the source water with Chlorine to kill microorganisms that can cause illness. Next, a chemical called Alum is mixed with water to remove the fine particles that make the water cloudy or turbid. Alum causes the particles to clump together and settle to the bottom. Fluoride is also added to protect our teeth from cavities and decay. The water then flows through fine sand filters called beds. These filters remove even more particles and certain microorganisms that are resistant to Chlorine. Finally, a small amount of ortho-phosphate and Chlorine are added to the treated water just before it leaves the treatment plant. Ortho-phosphate helps control any lead that may dissolve in water from household plumbing systems. Chlorine keeps the water disinfected as it travels through water mains to reach your homes. In addition to a carefully controlled and monitored treatment process, the water is tested for a variety of substances before treatment, during various stages of treatment and throughout the distribution system. Hundreds of samples are tested each week in the GLWA's certified laboratory (100 samples per month are taken from various locations in the Livonia distribution system). To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems.



What's In My Water?

The State and EPA require that water be tested on a regular basis to ensure its safety. We have met all monitoring and reporting requirements for 2024. We are also pleased to report that during the past year, the water delivered to your homes or businesses complied with, all State and Federal drinking water requirements. For your information, we have compiled a list in the table below showing what substances were detected in our drinking water and the last year in which the test was conducted.

Outdoor Water Use Guidelines

You can help reduce instances of low water pressure by following these voluntary guidelines:

- Program automatic sprinkler systems to water between 11 p.m. and 5 a.m.
- Avoid outdoor water use altogether between the hours of 5-9 a.m. and 5-9 p.m.

The amount of water that is used during summer peak demand hours is the one significant factor that can be controlled by Livonia water customers. You can help minimize annual rate increases by managing water purchases during peak summer demand hours.

Interesting Facts According to the EPA:

- The average garden hose dispenses 4 gallons a minute, or 240 gallons an hour.
- Each American uses an average of 82 gallons of water a day at home.
- It takes 70 gallons of water to fill an average bathtub.
- The average family can waste 180 gallons per week, or 9,400 gallons of water annually just from household leaks.
- A leaky faucet that drips at the rate of one drip per second can waste more than 3,000 gallons per year alone.



For More Information

For information about this report, or for questions relating to your drinking water, please contact Joey Schuetz, Water and Sewer Manager, at (734) 466-2632. Information regarding water treatment and regulations is available at the USEPA web site at www.epa.gov, or by calling their Safe Drinking Water Hotline at 1-800-426-4791.



2024 Springwells Regulated Detected Contaminants Table

2024 Inorganic Chemicals - Annual Monitoring at Plant Finished Tap								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Fluoride	02-13-2024	ppm	4	4	0.49	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	02-13-2024	ppm	10	10	0.31	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

2024 Disinfection Residual - Monitoring in the Distribution System								
Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Chlorine Residual	2024	ppm	4	4	0.74	0.63-0.76	no	Water additive used to control microbes

2024 Disinfection By-Products - Stage 2 Disinfection By-Products Monitoring in the Distribution System								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level LRAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
(TTHM) Total Trihalomethanes	2024	ppb	n/a	80	44.3	19-44	no	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2024	ppb	n/a	60	21.8	<1-33	no	By-product of drinking water chlorination

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Lead	ppb	2024	0	15	17 ppb	0-37	4	Lead services lines, corrosion of household, plumbing including fittings and fixtures; erosion of natural deposits.
Copper	ppm	2024	1.3	1.3	0.1	0-0.2	0	Copper service lines, Corrosion of household plumbing system; Erosion of natural deposits; leaching from wood preservatives.

* The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

2024 Springwells Tap Water Mineral Analysis

Parameter	Units	Max.	Min.	Avg.	Parameter	Units	Max.	Min	Avg.
Turbidity	N.T.U.	0.78	0.03	0.13	Phosphorus	mg/L	0.81	0.35	0.52
Total Solids	mg/L	148	126	136	Free Carbon Dioxide	mg/L	13.6	6.2	10.3
Total Dissolved Solids	mg/L	150	92	120	Total Hardness	mg/L	110	88	101
Aluminum	mg/L	0.088	0.020	0.037	Total Alkalinity	mg/L	82	66	73
Iron	mg/L	0.3	0.2	0.2	Carbonate Alkalinity	mg/L	9	0	1
Copper	mg/L	0.002	ND	0.001	Bi-Carbonate Alkalinity	mg/L	82	56	71
Magnesium	mg/L	8.6	6.7	7.8	Non-Carbonate Hardness	mg/L	36	12	28
Calcium	mg/L	29.8	25.6	27.4	Chemical Oxygen Demand	mg/L	8.3	ND	4.2
Sodium	mg/L	8.9	0.5	4.8	Dissolved Oxygen	mg/L	14.3	6.7	10.5
Potassium	mg/L	1.2	0.9	1.1	Nitrite Nitrogen	mg/L	ND	ND	0.0
Manganese	mg/L	ND	ND	0.000	Nitrate Nitrogen	mg/L	0.40	0.17	0.27
Lead	mg/L	ND	ND	0.000	Fluoride	mg/L	0.65	0.43	0.54
Zinc	mg/L	0.002	ND	0.000	pH		7.39	7.02	7.15
Silica	mg/L	3.7	1.7	2.3	Specific Conductance @ 25 °C	µmhos	233	147	200

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Sulfate	mg/L	35.9	24.8	28.8	Temperature	°C	23.2	1.9	13.7
Chloride	mg/L	13.2	9.9	11.1					



Key to the Detected Contaminants Table

Symbol	Abbreviation	Definition/Explanation
AL	Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
>	Greater than	
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, di-bromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
Level 1	Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our system.
LRAA	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
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 contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow a margin of safety.
MRDL	Maximum Residual Disinfectant Level	The highest level of disinfectant allowed in drinking water. There is convincing evidence that 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	not applicable	
ND	Not Detected	
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
pCi/L	Picocuries Per Liter	A measure of radioactivity
ppb	Parts Per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts Per Million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
RAA	Running Annual Average	The average of all analytical results for all samples during the previous four quarters.
SMCL	Secondary Maximum Contaminant Level	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.
µohms	Microohms	Measure of electrical conductance of water