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2021 Annual Drinking Water Quality Report

July 2022

The City of Farmington operates and maintains its water supply system. Title XIV of the United States Public Health Service Act (Chapter 373.88 Stat 1660), popularly known as The Safe Drinking Water Act, and the Michigan Safe Drinking Water Act (1976 PA399, amended to 1998 PA56) require a water supplier to provide to its customers Consumer Confidence Reports (CCR).

This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water sources. We are committed to ensuring the quality of our water. Our water is from one source, surface water from the Detroit River Belle Isle intakes via the Springwells Water Treatment Plant. We purchase the water from the Great Lakes Water Authority.

We're pleased to report that our drinking water is safe and meets federal and state requirements. If you have any questions about this report or concerns about our water quality, please contact Charles Eudy, Superintendent of Public Works at (248) 473-7250. We want our valued customers to be informed about their water quality.

System Design and Improvements

We work continually to provide high quality water to every tap. In order to maintain a safe and dependable water supply, we sometimes need to make improvements that will benefit all customers. These improvements are sometimes reflected as rate structure adjustments. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

While using our 2021 Water Reliability Study, the City can evaluate current and future water demands for proposed redevelopments within the community.

Since 2013 the City has installed approximately 2700 radio transmitting water meters which aid in accurate accounting of water usage and can detect leaks in residential and commercial dwellings.

Six (6) fire hydrants, ten (10) valves, 2300 feet of water main, and six (6) lead and four (4) galvanized water service lines were replaced during a road construction project.

Twelve (12) fire hydrants were repaired and one (1) replaced following the annual winterization inspection.

Five (5) employees maintain Water Distribution certification.

These types of projects and staff training continue to improve the reliability and capacity of our system.

Water Service Line Material

There are 3410 water service lines within the City of Farmington. Of those, there are zero (0) known lead services; twenty (20) known galvanized services; and three (3) unknown services awaiting verification. The remaining service lines are of either copper or poly material. One (1) previously unknown lead service line was replaced when discovered upon inspection.

Background Information

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 the 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 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.

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 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.

Your Water Quality

The City of Farmington water system is routinely monitored for contaminants in your drinking water in accordance with the Public Acts. The following tables show the results of our monitoring for the period of January 1 to December 31, 2021. In addition, other test results are shown for the year they were required. The most recent test date is listed in the table. Remember, the presence of some elements does not necessarily pose a health risk.

Maximum Contaminant Level (MCL) is the highest level of a contaminant that is allowed in drinking water and set at a very stringent level. To understand the possible health effects described from many regulated elements, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

We're proud that your drinking water meets or exceeds all federal and state requirements. The EPA has determined that your water IS SAFE at the levels detected.

Public comments on this report may be made at any City Council meeting. City Council meetings are scheduled for 7:00 pm on the third Monday of each month.

Detroit River Intakes Source Water Assessment

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, watersheds 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 Detroit Water and Sewerage Department (DWSD), and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of GLWA's Detroit River source water for 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 potential contaminant sources. The report described GLWA's Detroit River intakes as highly susceptible to potential contamination. GLWA's Springwells 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. In 2021 the Michigan Department of Environmental, Great Lakes and Energy approved the GLWA's 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 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)926-8102.

Springwells Water Treatment Plant 2021 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
2021 Inorganic Chemicals – Monitoring at Plant Finished Water Tap								
Fluoride	4/13/2021	ppm	4	4	0.52	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	4/13/2021	ppm	10	10	0.34	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5/16/2017	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2021 Disinfection By-Products – Monitoring in Distribution System Stage 2								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level LRAA	Range of Detection	Violation	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2021	ppb	n/a	80	28	21-34	no	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2021	ppb	n/a	60	15	13-20	no	By-product of drinking water disinfection

2021 Disinfectant Residuals – Monitoring in Distribution System by Treatment Plant								
Regulated Contaminant	Test Date	Unit	Health Goal MRDGL	Allowed Level MRDL	Highest Level RAA	Range of Detection	Violation	Major Sources in Drinking Water
Total Chlorine residual	Jan.-Dec. 2021	ppm	4	4	0.69	0.59-0.76	no	Water additive used to control microbes

2021 Turbidity – Monitored every 4 hours at Plant Finished Water Tap			
Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation	Major Sources in Drinking Water
0.20 NTU	100%	No	Soil Runoff
<p>GLWA is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards. We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. We did not produce a filter profile for EGLE review within 7 days of an August 1, 2021, individual filter exceedance at the GLWA Springwells Water Treatment Plant as required by law. A filter profile is a summary of the turbidity and flow through the filter and is used to identify any trends in filter performance.</p> <p>Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.</p> <p>What should I do? There is nothing you need to do currently. This is not an emergency. You do not need to boil water or use an alternative source of water currently. Even though this is not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.</p> <p>What happened? What is being done? The filter profile has since been produced and submitted to EGLE and additional response actions have been implemented at the plant. We are making every effort to ensure this does not happen again.</p> <p>Please share this information with all the 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 sent to you by GLWA.</p> <p>For more information, please contact the Water Quality Manager, at (313) 926-8102.</p>			

Contaminant	2021 Treatment Technique	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each quarter and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

2021 Special Monitoring

Collection and sampling result information in the table provided by Great Lakes Water Authority (GLWA) Water Quality Division ML Semegen

Contaminant	Test Date	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	4/13/2021	n/a	n/a	4.36	Erosion of natural deposits

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 organics, 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.

2021 Lead and Copper Monitoring at Customers' Tap									
Regulated Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples over AL	Violation yes/no	Range of Individual Results	Major Sources in Drinking Water
Lead	2021	ppb	0	15	0.0	0	No	0 ppb - 4 ppb	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.
Copper	2021	ppm	1.3	1.3	0.1	0	No	0.0 ppm - 0.3 ppm	Corrosion of household plumbing system; Erosion of natural deposits.
<p>*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.</p>									

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 Farmington 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 have a service line that is lead, galvanized previously connected to lead, or unknown but likely to be lead, it is recommended that you run your water 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, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Cross Connection Control Program

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) approved City of Farmington Cross Connection Control Program (CCCP). A cross connection is a connection that could allow backflow/back siphon of nonpotable water or pollutants into the public drinking water supply. The CCCP helps prevent contamination protecting the quality of the water system, the safety and public health of all water customers.

2021 Key to the Detected Contaminant Tables

Symbol	Abbreviation for	Definition/Explanation
>	Greater than	
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
Level 1	Level 1 Assessment	A Level 1 assessment is a study of the waer system to identify potential problems and determine (if possible) why total coliform bacteria have been found in the water 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.
mg/L	Milligrams per liter	A milligram = 1/1000 gram 1 milligram per liter is equal to 1 ppm
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 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.
µmhos	Micromhos	Measure of electrical conductance of water

CITY OF FARMINGTON OUTSIDE WATER RESTRICTIONS

Time		Commercial Lawn Irrigation Automated	Residential Lawn Irrigation Automated	Residential Lawn Irrigation Manual	Residential Garden Irrigation Automated	Residential Garden Irrigation Manual
FROM	TO					
Odd-Even Restriction		Yes	No	No	No	No
Midnight	6:00 a.m.	Not Prohibited	Not Prohibited	Not Prohibited	Not Prohibited	Not Prohibited
6:00 a.m.	11:00 a.m.	Prohibited	Prohibited	Not encouraged	Not encouraged	Not encouraged
11:00 a.m.	7:00 p.m.	Not encouraged	Not encouraged	Not encouraged	Not encouraged	Not encouraged
7:00 p.m.	10:00 p.m.	Prohibited	Prohibited	Not encouraged	Not encouraged	Not encouraged
10:00 p.m.	Midnight	Not Prohibited	Not Prohibited	Not Prohibited	Not Prohibited	Not Prohibited