



City of Fitchburg Public Works Department Utility District
2019 Annual Water Quality Report
Danville System
PWSID#11340989

THE MARK OF EXCELLENT SERVICE

The City of Fitchburg, Public Works Department/Utility Division, is pleased to present to you the 2019 Annual Water Quality Report. We are committed to providing our customers with safe and reliable drinking water. This commitment demands diligence, foresight, investment, and long-range planning.

Fitchburg purchases water from the Madison Water Utility to service the Danville Neighborhood. This purchased water primarily comes from Madison's Well 20. Madison pumps groundwater from 23 deep wells. Each well ranges in depth from 500 to 1,188 feet deep. Madison also has 43.235 million gallons of auxiliary storage capacity.



The City of Madison disinfects your water with gas chlorine to reduce harmful contaminants that may come from the source water. Madison's goal is to maintain a chlorine residual above 0.1 milligrams per liter (mg/l) at all points in their distribution system. Typical concentrations range from 0.2 to 0.4 mg/l.

Fluoride is also added to Madison's drinking water to improve dental health and reduce tooth decay. The US Centers for Disease Control and Prevention (CDC) and the Wisconsin Department of Health Services recommend maintaining an average fluoride level of 0.7 mg/l. Madison tests water from each well daily to achieve this target level. In 2019, Madison's system-wide average of 6,752 tests was 0.71 mg/l. Certified staff at the City of Fitchburg and certified laboratories conduct bacteriological tests twice a month.

In addition, two wells have iron and manganese filters. A third well is outfitted with a low-profile air stripper to remove volatile organic compounds (VOC) including PCE and TCE. After air stripping, an additive adjusts the pH to limit chemical scales that can clog water pipes.

MESSAGE FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA)

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).

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 EPA's safe drinking water hotline (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.

Contaminations 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 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, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottle water, which shall provide the same protection for public health.

CONTAMINANT REPORTING

The EPA and Wisconsin Department of Natural Resources (WDNR) establish the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The table below shows the concentrations of detected substances in comparison to the regulatory limits. Substances not detected are not included in the table.

Terms and units used in the Water Quality Table are identified and defined below:

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 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.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a public water system shall follow.

Unregulated Contaminants: Those contaminants for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Monitoring of unregulated contaminants is required by EPA.

90TH Percentile: 90% of samples are equal to or less than the number on the chart.

Units in the Table:

nd = not detected at testing limits

ppb = parts per billion

ppm = parts per million

pCi/L = picocuries per liter – a measure of radioactivity
millirems/year = a measure of radiation absorbed by the body.

ug/l = micrograms per liter

mg/l = milligrams per liter

n/a = not applicable

LEAD AND COPPER

Contaminant	Unit	Action Level	MCLG	90 th Percentile	# of Results	Sample Date (if prior to 2019)	Violation	Typical Source of Contamination
Copper	ppm	1.3	1.3	0.1700	0 of 5 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	ppb	15	0	1.45	0 of 5 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

* Systems exceeding a lead and/or copper action level must take actions to reduce lead and/or copper in the drinking water. The lead and copper values represent the 90th percentile of all compliance samples collected. If you want information on the NUMBER of sites or the actions taken to reduce these levels, please contact your water supply operator.

** Sampling Date listed only if prior to 2019.

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 Fitchburg and Madison Water Utility 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 for the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

WATER QUALITY


Contaminant	Unit	MCL	MCLG	Level Detected	Range	Violation (Yes/No)	Wells with Detections	Potential Source of Contamination
Disinfection Byproducts								
Haloacetic Acids [HAA5]	ppb	60	60	1	1	No	n/a	By-product of drinking water chlorination
Total Trihalomethanes (TTHM)	ppb	80	0	3.2	3.2	No	n/a	By-product of drinking water chlorination
Regulated Contaminants								
Arsenic	ppb	10	10	non-detect	nd - 0.6	No	8,11,14,30	Erosion of natural deposits; Glass & electronics production
Atrazine (2017 data)	ppb	3	3	non-detect	nd - 0.03	No	Well 29	Runoff from herbicide on row crops
Barium	ppb	2000	2000	19	7.3 - 61	No	All wells	Erosion of natural deposits; Discharge from metal refineries
Chromium, Total	ppb	100	100	non-detect	nd - 8.9	No	6,9,11,12,13,14,16,17,20	Erosion of natural deposits; Discharge from steel and pulp mills
1,2-Dichloroethylene, cis	ppb	70	70	non-detect	nd - 0.4	No	Well 11	Discharge from industrial chemical factories; Biodegradation of PCE and TCE
Ethylbenzene	ppb	700	700	non-detect	ND - 0.5	No	Well 9	Discharge from petroleum refineries
Fluoride	ppm	4	4	0.7	0.6 - 0.8	No	All wells	Erosion of natural deposits; Water additives which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nickel	ppb	100	n/a	3.6	1.0 - 5.3	No	All wells	Occurs naturally in soils, ground water and surface waters; Used in electroplating, stainless steel and alloy products
Nitrate	ppm	10	10	0.8	nd - 4.8	No	Fourteen wells	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion from natural deposits
Selenium	ppb	50	50	non-detect	nd - 3.1	No	6,9,11,12,13,14,16	Erosion of natural deposits; Discharge from petroleum and metal refineries
Tetrachloroethylen (PCE)	ppb	5	0	non-detect	nd - 3.4	No	6,7,9,11,14,18,27	Discharge from factories, dry cleaners, and auto shops
Thallium	ppb	2	0.5	non-detect	nd - 0.3	No	11,17,19,27	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Trichloroethylene (TCE)	ppb	5	0	non-detect	nd - 0.4	No	Well 18	Discharge from metal degreasing sites, other factories
Xylene, Total	ppb	10000	10000	non-detect	nd - 3.0	No	Well 9	Discharge from petroleum and chemical factories
Radioactive Contaminants								
Gross Alpha	pCi/l	15	0	5.4	1.1 - 10	No	Each well sampled: 7,8,19,24,27,28,30,31	Erosion of natural deposits
Gross Beta	pCi/l	50	0	6.0	2.3 - 9.9	No		Decay of natural and man-made deposits
Radium, (226+228)	pCi/l	5	0	3.4	0.9 - 5.9	No		Erosion of natural deposits
Uranium	ppb	30	0	0.3	0.3 - 0.4	No	Only well 31 sampled	Erosion of natural deposits
Unregulated Contaminants								
Bromide	ppb	n/a	n/a	39	nd - 60	No	7,9,11,13,15,29	Erosion of natural deposits
Chloromethane	ppb	n/a	n/a	non-detect	nd - 0.7	No	Well 18	Discharge from chemical factories; Refrigerant; Organic combustion
Chromium, Hexavalent (2018 data)	ppb	n/a	n/a	0.5	nd - 2.0	No	Thirteen wells	Erosion of natural deposits; Chrome plating, leather tanning, wood preservation
1,4-Dioxane (2018/2019 data)	ppb	n/a	n/a	0.1	nd - 0.4	No	9,11,14,15,18	Discharge from chemical factories; Cosmetics and detergents
Metolachlor (2017 data)	ppb	n/a	n/a	non-detect	nd - 0.01	No	Well 14	Runoff from herbicide used on row crops
PFOA & PFOS	ppt	n/a	n/a	< 1	nd - 12	No	Twelve wells	Firefighting foam; Landfills, food packaging, clothing, fabrics, upholstery
Strontium	ppb	n/a	n/a	77	48 - 100	No	All wells	Erosion of natural deposits
Trichlorofluoromethane	ppb	n/a	n/a	non-detect	nd - 0.6	No	Well 11	Discharge from industrial chemical factories; Degreaser, propellant, refrigerant
Other Substances								
Chloride	ppm	n/a	n/a	21	nd - 170	No	Twenty wells	Erosion of natural deposits; Road salt application
Iron	ppm	n/a	n/a	0.02	< 0.01 - 0.54	No	All wells	Erosion of natural deposits
Manganese	ppb	n/a	n/a	3.1	nd - 49	No	All except Well 14	Erosion of natural deposits
Sodium	ppm	n/a	n/a	7.3	2.1 - 52	No	All wells	Erosion of natural deposits; Road salt application
Sulfate	ppm	n/a	n/a	21	5.7 - 43	No	All wells	Erosion of natural deposits

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WATER CONSERVATION

The City of Fitchburg is offering toilet rebates of up to \$100 for residential properties who replace their high water using toilets with EPA WaterSense approved high efficiency toilets. Please visit our website at www.fitchburgwi.gov for eligibility requirements and to obtain an application.

 5 SIMPLE WAYS TO SAVE WATER	
Be smart when irrigating your lawn or landscape	<ul style="list-style-type: none">• Water in early morning.• Water plants according to their water needs.• Set sprinklers to water lawns and gardens only – no sidewalks or driveways.• Use soaker hoses or trickle irrigation systems for trees/shrubs.• Install a rain barrel.
Use appliances wisely	<ul style="list-style-type: none">• Wash only full loads; set small loads to appropriate level.• Scrape rather than rinse dishes before loading the dishwasher• Replace old clothes washer with ENERGY STAR labeled one.
Don't flush money down the toilet/drain	<ul style="list-style-type: none">• Check your toilet for leaks by adding food coloring to the tank and seeing if color appears in the bowl within 15 minutes.• When replacing your toilet, look for WaterSense labeled models.
Conserve around the house	<ul style="list-style-type: none">• Keep drinking water in the refrigerator; don't run faucet till cool.• Don't leave the tap running while brushing teeth or shaving.• Take shorter showers.• Install low-flow showerheads and faucets.
Stop leaks	<ul style="list-style-type: none">• Read water meter before and after a two-hour period when no water is being used; it should be zero. If it is not zero, locate the leak and repair it.

FOR MORE INFORMATION

Please contact Philip Manion, Fitchburg Utility Supervisor, via e-mail at philip.manion@fitchburgwi.gov or by phone at 608-729-1730 for more information or visit our web-site at www.fitchburgwi.gov. You are encouraged to attend the City's Board of Public Works meetings at Fitchburg City Hall, 5520 Lacy Road. Please see the Public Meetings Calendar on our web-site for meeting dates and times.