



Drinking Water Consumer Confidence Report

City of Fairfield

A comprehensive review of scientific
testing during operational year 2007

What is the Source of Your Drinking Water?

The City of Fairfield gets its water from the Great Miami Buried Valley Aquifer, a sand and gravel aquifer formed by glaciers more than 10,000 years ago. Utilizing six deep wells, 1.4 billion gallons of water was pumped during 2007 to the City's Water Treatment Plant for treatment. To ensure water quality and source water protection, the aquifer is monitored by the Hamilton to New Baltimore Groundwater Consortium, comprised of the City of Fairfield, City of Hamilton, City of Cincinnati, Southwest Regional Water District, Southwestern Ohio Water Company, Miller Brewing Company, and Butler County Department of Environmental Services).



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Drinking water, including bottled water, may 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 may be obtained by calling the United States Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline at (800) 426-4791. The USEPA Drinking Water Web Site is www.epa.gov/safewater.

Wellhead Protection/Source Water Protection

The City of Fairfield and the Consortium have worked hard to develop and implement a comprehensive wellhead protection plan to prevent contamination from impacting the drinking water source. The protection plan contains an educational component, source control strategies, a contingency and emergency response plan and groundwater monitoring strategies. More information about the source water assessment or what consumers can do to help protect the aquifer is available by calling Tim McLelland, Wellhead Protection Coordinator at (513) 785-2464 or visiting the Consortium website at www.gwconsortium.org.

Sources of Drinking Water Contamination

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.

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 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 organic chemicals, 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*); **Turbidity** (*from soil runoff*); **Trihalomethanes** (*a product of drinking water chlorination*); and **Nitrates** (*resulting from runoff of fertilizer and leaching from septic tanks*).

How is Your Water Treated?

The City's Water Treatment Plant is designed to pump raw water from the wells and produce a consistently high quality finished water. The original Ion Exchange Plant, built in 1955 was retired in 2004. The Lime Plant, originally built in 1985 and expanded in 1998 to meet growing water needs, softens water by calcium precipitation. The City adds fluoride and chlorine to the water. The City practices a more rigorous testing program than required by EPA for any detected contaminant in an effort to provide you with quality drinking water.

The City of Fairfield analyzes the final drinking water for all parameters outlined in the National Primary Drinking Water Regulation: Consumer Confidence Report 40 CFR Parts 141 and 142. In addition, the City analyzes the water for many unregulated chemical compounds.

Health Conditions May Require 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, the elderly, infants and expectant mothers 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* (a microscopic organism that, when ingested, can result in diarrhea, fever and other gastrointestinal symptoms) and other microbial contaminants are available from the Safe Drinking Water Hotline (800) 426-4791.

What's in Fairfield's Drinking Water?

Listed below is information on contaminants that were found in the City of Fairfield's drinking water in 2007. Data is the result of monitoring required by EPA, some of which are not required to be monitored each year. Samples were collected in the distribution system and at plant taps as required by EPA. 2007 daily averages for the Lime Treatment Process are as follows:

pH (S.U.)	8.3	Chlorine (ppm)	1.02	Hardness (ppm)	116
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Contaminant (Units)	MCLG	MCL	Level Found	Range of Detection	Violation?	Typical Source of Contaminant
Inorganic Contaminants						
Fluoride (mg/l)	4	4	1.19	1.03-1.19	No	Water additive which promotes strong teeth; erosion of natural deposits
Nitrate (mg/l)	10	10	0.86	1.10	No	Fertilizer use run-off; leaching of septic tanks; sewage; erosion of natural deposits
Volatile Organic Contaminants						
Total Trihalomethanes (TTHMs) - (ppb)	0	80	36.08	20.19-36.08	No	By product of drinking water chlorination
Chloroform (ppb)	NA	NA	5.44	3.22-5.44	No	By-product of drinking water chlorination
Bromoform (ppb)	NA	NA	8.34	3.63-8.34	No	By-product of drinking water chlorination
Bromodichloromethane (ppb)	NA	NA	9.35	5.57-9.35	No	By-product of drinking water chlorination
Dibromochloromethane (ppb)	NA	NA	14.3	7.77-14.3	No	By-product of drinking water chlorination
Haloacetic Acids						
Dibromoacetic Acid (ppb)	NA	60	4.05	2.80-4.05	No	By-product of drinking water chlorination
Dichloroacetic Acid (ppb)	NA	60	2.8	1.63-2.8	No	By-product of drinking water chlorination
Monobromoacetic Acid (ppb)	NA	60	ND	ND	No	By-product of drinking water chlorination
Trichloroacetic Acid (ppb)	NA	60	1.6	ND-1.60	No	By-product of drinking water chlorination

- AL** Action Level—Concentration of a contaminant which triggers treatment or other requirements which a water system must follow. For lead and copper, the action level (AL) is defined as the 90th percentile sample
- MCL** Maximum Contaminant Level - the highest level allowed in drinking water
- MCLG** Maximum Contaminant Level Goal - the level below which there is no known or expected risk to health

- mg/l** Parts per million or milligrams/liter
- NA** Not Applicable
- ND** Below Analytic Method Detection Level
- ppb** Parts per billion or micrograms/liter
- ug/l** Micrograms per liter

Because accurate test methods for detecting *Cryptosporidium* at very low levels are not available, the EPA does not require testing of treated drinking water unless their concentration in the raw water exceeds 10 per liter. The City was not required to monitor for *Cryptosporidium*.

YOU can help safeguard drinking supplies

Every effort helps safeguard the underground water supply on which Fairfield relies for its drinking water. The safe disposal of household items such as cleaning products, old pool chemicals, motor oils and paints/solvents is an important step in safeguarding our environment. When applying lawn care products, carefully follow mixing instructions, then apply as directed. The proper disposal of used motor oils can also help protect water resources.

Protection our water resources is only the beginning of each household's efforts to safeguard our environment. Recycling practices and energy conservation are encouraged in every Fairfield home and business.

For More Information...

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Fairfield is a charter member of the Hamilton to New Baltimore Groundwater Consortium, comprised of Fairfield, Hamilton, Cincinnati, Southwest Regional Water District, the Southwest Ohio Water Company, Miller Brewing Company and the Butler County Department of Environmental Services. The organization maintains an informative website at www.gwconsortium.org.

The public is invited to express its views or questions concerning this report. Regular meetings of Fairfield City Council are held on the second and fourth Monday of each month at 7:00 p.m. in Council Chambers. *(No 4th Monday meetings in June, July or August.)*

This report was prepared in accordance with the U.S. EPA's National Primary Drinking Water Regulation for Consumer Confidence Reports. Additional Reports are available upon request. Visit the City of Fairfield on the Web at www.fairfield-city.org.



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