

# Milford Water Works Water Quality Report

Milford City Council, the Milford Water Works, and its operators are proud to present this consumer-confidence report, which includes information related to our water quality for last year, January 2014 through December 2014. Safe drinking water is our primary commitment. The Milford Water Works is controlled by the City Manager and City Council. Questions concerning the water system may be directed to Matt Newman, Water Plant Supervisor, at 831-6819 at the Water Treatment Plant, or 248-5080 at City Hall. Milford City Council meets the first and third Tuesday of the month, and all meetings are open to the public.

## **Where does our Water come from?**

Sources of drinking water generally include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves in naturally-occurring minerals and radioactive materials and can pick up substances resulting from human or animal activity.

Milford's raw water is drawn from 4 wells located on the east bank of the Little Miami River in Milford. These wells are approximately 50–60 feet deep and draw their water supply from the aquifer. This raw water is then passed through our treatment process, which includes air stripping, lime softening, stabilization, filtration, chlorination, and fluoridation.

## **What Contaminants might be in the Water?**

Contaminants that may be present in raw or source water before it is treated are microbial contaminants, inorganic contaminants, pesticides and herbicides, radioactive contaminants, and organic chemical contaminants.

- Microbial contaminants, such as viruses and bacteria: may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals: 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: may come from a variety of sources, such as agricultural and residential uses.
- Radioactive contaminants: are naturally occurring.
- Organic chemical contaminants, including synthetic and volatile organic chemicals: are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

## **Are These Contaminants in Milford's Water?**

We are pleased to report that Milford met and exceeded all Federal Drinking Water Standards last year. However, drinking water (including bottled water), may reasonably be expected to contain at least small amounts of some contaminants. The Safe Drinking Water Act directs the state along with the EPA (Environmental Protection Agency) to establish and enforce limits on the amount of contaminants that can be in drinking water. Milford tests your water on a daily basis. In addition to these daily tests, we also test weekly for coliform bacteria, which can cause illness. VOCs (Volatile Organic Compounds) are present in the raw water wells #1 and #3 but are below established maximum limits after being passed through the air stripper before final treatment of the water.

Radon is a radioactive gas that occurs naturally in some ground water. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. Major sources of radon gas are soil and

cigarettes. Inhalation of radon gas has been linked to lung cancer, however, the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, call 1-800-SOS RADON.

- The earth’s surface is nearly 80% water. Of that, 97% is saltwater, 2% is glacier ice, and the remaining 1% is freshwater. The freshwater should be enough to support us if we conserve and protect it.
- Typically, households consume approximately 30% of their water for outdoor use, such as watering the lawn. Inside, toilets use the most water, with an average of 27 gallons per person per day.
- Each day public water systems supply every person in the U.S. with approximately 160 gallons of clean water.
- The average five-minute shower takes between 15 to 25 gallons of water.
- You can refill an 8oz. Glass of water approximately 15,000 times for the same cost as a six-pack of soda.
- An automatic dishwasher uses approximately 9 to 12 gallons of water while hand washing dishes can use up to 20 gallons.
- A gallon of paint or a quart of motor oil can seep into the Earth and pollute 250,000 gallons of drinking water, and a spilled gallon of gasoline can pollute 750,000 gallons of water.
- Of all the water on earth, only 2.5% is fresh water. Fresh water is either groundwater (0.5%), or readily accessible water in lakes, streams, rivers, etc (0.01%).

\*Information compiled from the OEPA pamphlet “Ohio’s Drinking Water...Meeting the Need”, and 50 Simple Things Kids Can Do to Save the Earth (Earthworks Group).

Read more: <http://www.lenntech.com/water-trivia-facts.htm#ixzz0l4rx6kUz>

Inorganics (Parts per Million--mg/l)							
Inorganics	MCLG <sup>1</sup>	MCL <sup>2</sup>	Highest Level Found	Range	Violation	Sample Year	Typical Source of Contaminants
Fluoride	4 mg/l	4 mg/l	1.26	.55 – 1.26	No	2014	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrogen, Nitrates, and Nitrite (as N)	10 mg/l	10 mg/l	3.23	3.23	No	2014	Run off from fertilizers, leaching from septic tanks, sewage, and erosion of natural deposits
Copper <sup>3</sup>	AL <sup>4</sup> =1.35 mg/l	AL=1.35 mg/l	.073	.0068-.073	No	2013	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead <sup>3</sup>	AL = .015 mg/l	AL = .0155 mg/l	.00968	.00216 - .00968	No	2013	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine <sup>5</sup>	MRDLG = 4 mg/l	MRDL = 4 mg/l	1.36	0.72 – 1.36	No	2014	Water additive used to control microbes

Volatile Organic Contaminants (Parts per Billion –ug/l)							
Volatile Organic Contaminants	MCLG	MCL	Highest Level Found	Range	Violation	Sample Year	Typical Source of Contamination
Bromodichloromethane	Unregulated		4.97	0.85 – 4.97	N/A	2014	By-product of drinking-water chlorination
Bromoform	Unregulated		7.41	2.30 – 7.41	N/A	2014	By-product of drinking-water chlorination
Chloroform	Unregulated		2.45	<0.5 – 2.45	N/A	2014	By-product of drinking-water chlorination
Dibromochloromethane	Unregulated		8.13	1.99 – 8.13	N/A	2014	By-product of drinking-water chlorination
Total Trihalomethanes	0	80 ug/l	22.96	22.96	No	2014	By-product of drinking-water chlorination
Haloacetic Acids	0	60 ug/l	1.25	1.25	No	2014	By-product of drinking-water chlorination
1,1,1-Trichloroethane	0	200 ug/l	3.02	3.02	No	2013	Discharge from Factories

1. MCLG= “Maximum Contaminant Level Goal”— A level of a contaminant, not necessarily achievable, safely below the level of human health concerns.
2. MCL= “Maximum Contaminant Level”— An enforceable level of a contaminant as close to the goal as is practical to achieve in light of available treatment technology and cost/benefit considerations.
3. No samples were found to have levels in excess of the Action Level.
4. AL= “Action Level”— 90% of test results must be less than specified limit.
5. MRDLG (Maximum Residual Disinfectant Level Goal): Level of drinking water disinfectant below which there is no known or expected risk to health.  
MRDL (Maximum Residual Disinfectant Level): 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.

**Lead:** Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels in your home may be higher than at other homes in the community as a result of materials used in your home’s plumbing. If you are concerned about elevated lead levels in your home’s water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791) and by calling Milford City Hall (513-248-5081). We will continue our Lead and Copper Testing through 2012 and keep residents informed.

Some people may be more vulnerable to drinking water contaminants than the general population. Immuno-compromised persons, such as people with cancer undergoing chemotherapy, people 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/Centers for Disease Control 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.

## **Development**

In March of 2011 the City was placed on the Superfund Program National Priority List. This makes the City eligible to receive federal funding to help better locate and remediate the contamination in the aquifer. Presently only two of the City's four wells are contaminated. Since the discovery in 1985 the City has successfully removed all contamination in the drinking water by using a method called Air Stripping. This process aerates the water to remove VOC's. The OEPA has approved this method and it is still one of the few methods used for removal.

## **Monitoring Violation**

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 your drinking water meets health standards. During the third quarter of 2014 (July 1 thru September 30) we failed to complete all testing for VOC's and therefore can not be sure of the quality of your water during that time.

## **EPA Findings**

Ohio EPA completed a study of the City of Milford's source of drinking water to identify potential contaminant sources and provide guidance and protect the drinking water source. According to this study, the aquifer that supplies water to the City of Milford has a high susceptibility to contamination. This determination is based on the following:

- the presence of a relatively thin protective layer of clay/shale/other overlaying the aquifer,
- shallow depth (less than 20 feet below ground surface) of the aquifer,
- the presence of significant potential contaminant sources in the protection area,
- And the presence of manmade contaminants in treated water. Several volatile organic compounds and nitrate were detected in the treated and raw water at levels of concern since 1991. This indicates a manmade influence.

The risk of future contamination will be minimized through our endorsed wellhead protection plan. For more information about the source water assessment or what consumers can do to help protect the aquifer contact Matt Newman, Water Plant Supervisor, at 513-831-6819. The City of Milford has a current unconditioned license to operate our water system.