

2008 Regulated Contaminants Detected

Coliform Bacteria	MCLG	Total Coliform MCL	Highest Number of Positive Samples	Fecal Coliform or <i>E. coli</i> MCL	Total No. of Positive <i>E. coli</i> or Fecal Coliform Samples	Violation	Likely Source of Contamination
	0	MCL: presence of coliform bacteria in > 5% of monthly samples (for systems that collect 40 or more samples/month). > 1 positive monthly sample (for systems that collect < 40 samples/month).	1	Fecal Coliform or <i>E. coli</i> MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	0	N	Naturally present in the environment

Lead and Copper		Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	7/28/8 – 8/13/8	1.3	1.3	.039	0	ppm	N	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	
Lead	7/28/8 – 8/13/8	0	15	5.2	1	ppb	N	Corrosion of household plumbing systems; erosion of natural deposits.	

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 Macomb Water Treatment Plant 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 from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Disinfectants & Disinfection Byproducts	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	4/28/8	23	7.9 – 26.1	No goal	60	ppb	N	By-product of drinking water chlorination
Total Trihalomethanes (TThm)	4/28/8	75	31.8 – 89.6	No goal	80	ppb	N	By-product of drinking water chlorination
Inorganic Contaminants								
Barium	5/29/8	.031	.031 - .031	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Beryllium	5/29/8	1	0 - 1	4	4	ppb	N	Discharge from metal refineries and coal burning factories; Discharge from electrical, aerospace, and defense industries.
Fluoride	5/29/8	.7	.71 - .71	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	5/29/8	6	1 – 6.2	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	5/29/8	2	2 – 2	50	50	ppm	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Sodium	5/29/8	10	9.8 – 9.8	N/A	N/A	ppm	N	Erosion from naturally occurring deposits; Used in water softener regeneration
Synthetic Organic Contaminants (pesticides and herbicides)								
Atrazine	2/11/8	.31	0 - .31	3	3	Ppb	N	Runoff from herbicides used in row crops.
Volatile Organic Contaminants								
Radiological Contaminants								
Combined Radium 226/228	1/3/7	1.5	1.5 – 1.5	0	5	pCi/L	N	Erosion of natural deposits.
Gross Alpha excluding radon and uranium	1/3/7					pCi/L	N	Erosion of natural deposits.
State Regulated Contaminants								
Unregulated Contaminants								

Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old.

Turbidity				
Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.				
	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Lowest Monthly % Meeting Limit	0.3 NTU	72.99%	Y	Soil Runoff
Highest Single Measurement	1 NTU	4.35 NTU	Y	Soil Runoff

Total Organic Carbon	
The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA, unless a TOC violation is noted in the violation section.	

The following table(s) lists all violations that occurred during 2008. We included a brief summary of the actions we took following notification of the violation.

Contaminant or Program	Violation Type	Violation Duration Start Date – End date	Violation Explanation
	Monthly combined filter effluent (IESWTR/LT1)	2/1/8 – 2/29/8	Turbidity levels exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water. Heavy rains caused a sudden soil runoff issue which compromised our clarification process and ultimately our filters which allowed the combined filter effluent to exceed the IEPA requirement of .3 NTU's 76% of the time during the month.
Health Effects (if applicable)			
Actions we took:	A Drinking Water Alert was issued until testing verified that there was no evidence of a risk to public health. Coagulation and filtration processes were modified to reach optimized performance goals.		

	Monthly combined filter effluent (IESWTR/LT1)	3/1/8 - 3/31/8	Turbidity levels exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water. Heavy rains caused a sudden soil runoff issue which compromised our clarification process and ultimately our filters which allowed the combined filter effluent to exceed the IEPA requirement of .3 NTU's 75% of the time during the month.
Health Effects (if applicable)			
Actions we took:	Coagulation and filtration processes were modified to reach optimized performance goals.		

	Single combined filter effluent (IESWTR/LT1)	2/1/8 – 2/29/8	Turbidity levels exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water. Heavy rains caused a sudden soil runoff issue which compromised our clarification process and ultimately our filters which allowed the combined filter effluent to exceed the IEPA requirement of 1 NTU.
Health Effects (if applicable)			
Actions we took:	A Drinking Water Alert was issued until testing verified that there was no evidence of a risk to public health. Coagulation and filtration processes were modified to reach optimized performance goals.		

Monitoring (and reporting) violations require that an annual public notice be distributed to all customers. To help save on cost, we are allowed to issue this annual public notice along with this Drinking Water Quality Report. Therefore, the remaining information is to satisfy our public notice requirements for the past year. If you have any questions, please call or E-mail the contact listed on the first page.



water, and how the water quality compares with the regulatory standards. We are dedicated to providing you with a reliable supply of high quality drinking water.

Where Does My Drinking Water Come From?

During 2008 the City of Macomb provided water to our customers from two sources. The majority came from our surface water source at Spring Lake. The remainder was pumped from the groundwater aquifer directly beneath Macomb.

Treatment Process

The Illinois Environmental Protection Agency (IEPA) considers all surface water sources of community water supplies to be susceptible to potential pollution problems, hence the reason for mandatory treatment for all surface water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration, and disinfection. After this treatment process the finished drinking water is discharged into a million gallon clear well where it is blended with treated ground water before being pumped to the distribution system. Our ground water source receives reverse osmosis (RO) treatment before being discharged into our clear wells where it is blended with our surface water.

What Contaminants May Be Present in Sources of drinking Water?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land, or through the ground, it dissolves naturally occurring minerals, and in some cases radioactive materials. In addition, substances resulting from the presence of animals or from human activity can be picked up as well.

Contaminants that may be present in source water include;

Microbial Contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial, 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 be 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.

Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The mere presence of contamination 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 at (800) 426-4791.

In order to ensure that tap water is safe to drink the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 or other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Treatment Technique Violation.

During 2008 the City of Macomb experienced turbidity readings in excess of the IEPA's maximum contaminant levels (MCL) in February and March. Turbidity has no health effects, however turbidity can interfere with disinfection and provide a medium for bacteria 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. The turbidity violation went above the IEPA regulatory level and did trigger a Drinking Water Alert.

What We're Doing to Address the Violations

The City of Macomb retained the services of Benton & Associates, an engineering firm, to conduct a performance evaluation of our equipment and operating procedures. The City of Macomb has also completed Comprehensive Performance Evaluation and Comprehensive Technical Assistance programs for our water treatment operation. As a result of the evaluation the City of Macomb is moving forward and modernizing treatment processes that will reduce turbidity. The City of Macomb is confident that these water treatment plant improvements will eliminate future turbidity violations once construction is completed in 2010.

Questions?

For more information or questions regarding this report please contact Walter Burnett, Public Works Director, or Brian McIlhenny, Water Treatment Manager, at 309-833-2821.

Este informe contiene informacion muy importante sobre su agua potable. Par mas informacion o traduccion, favor de contactar a Walter Burnett. Telofono: 309-833-2821.