

# 2017 Consumer Confidence Report



# Village of Mt. Zion

## Consumer Confidence Report For 2017

In 1996, the U.S. Congress and the president amended the Safe Drinking Water Act. They added a provision requiring that all community water systems deliver an **annual** water quality report to their customers. This report includes basic information on the source(s) of your water, the levels of any contaminants detected in the water, compliance with other drinking water rules, as well as some brief educational material.

This report is called the "**Consumer Confidence Report.**"

Consumers who are familiar with the basic drinking water information in the CCR will not only help to make informed choices that affect the health of themselves and their families, they will also consider the challenges of delivering safe drinking water. Educated consumers are more likely to help protect drinking sources and be more understanding of the need to upgrade the treatment facilities that make their drinking water safe.

The Village of Mt. Zion purchases water from the City of Decatur. Although the village has no authority in producing water quality, the village is still responsible for sampling, monitoring, and maintenance of the water distribution within the village limits. The Mt.Zion Water Department obtains over 20 water samples each month and monitors water quality on a weekly basis.

At certain times, decisions affecting the water supply are made by the Village of Mt. Zion Board, which meets on the first and third Mondays each month at 5:15 p.m., 1400 Mt. Zion Parkway, Mt. Zion, IL 62549. Information on Board meeting agendas may be obtained by calling the Village Clerk at 864-5424.

If you have any questions, please contact the Village Administrator at 864-5424.

**For the year of 2016**, your tap water met all other USEPA and State drinking water standards. This report summarizes the quality of water that we provided last year, including details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with information about Decatur's drinking water so that you will be an informed consumer. If you have any questions about this report or concerning your water system, please call Rob Shirley, Water Production Manager, at 217-424-2866 or e-mail at [rshirley@decaturnet.org](mailto:rshirley@decaturnet.org).

### **Source Water**

Our water drinking water is supplied by Lake Decatur and nine groundwater wells. Lake Decatur is 2,850 surface acres in size and is located entirely within the City limits of Decatur. The Sangamon River is the primary source of water for Lake Decatur, which has a drainage area of 925 square miles, 87% of which is used for growing corn and soybeans. When Lake Decatur water levels are low, the City uses wells located in Macon and Dewitt Counties to supplement the water supply.

### **Source Water Assessment**

The Source water assessment for our water supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by Village Hall or call our water operator at 217-864-4811. Illinois EPA considers all surface water sources of public water supply to be susceptible to potential pollution problems. Hence the reason for mandatory treatment of all public water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration and disinfection. Primary sources of pollution in Illinois lakes can include agricultural runoff, land disposal (septic systems) and shoreline erosion. Due to the low geologic sensitivity of the wells and monitoring results, the Illinois EPA does not consider Decatur's wells to be susceptible to volatile organic contaminants (VOCs), synthetic organic contaminants (SOCs) or inorganic contaminants (IOCs). In accordance with Illinois EPA regulations, the wells each have a minimum protection zone of 200 feet.

Under the Clean Water Act Section 319, the U.S. EPA provides grants for the Illinois EPA to finance projects that demonstrate cost-effective solutions to nonpoint source (NPS) problems and promote public knowledge and awareness of NPS pollution. Section 319 projects funded for the Lake Decatur Watershed include the Upper Sangamon River Basin Water Quality Improvement Project and the Nutrient Management Plan Implementation. The Macon County Soil and Water Conservation District and the Agricultural Watershed Institute also administer several water quality improvement projects in the watershed.

Groundwater protection efforts have included Illinois EPA. To further minimize the risk to the city's groundwater supply, the Illinois EPA recommends that three additional activities be considered. First, the water supply staff may wish to revisit their contingency planning documents in order to ensure the plans are kept current, and the water department and emergency response staff are aware of and minimize their risk of being without safe and adequate water. Second, the water supply staff is encouraged to review and sustain their cross connection control program to ensure that it remains current and viable. Cross connections to either the water treatment plant or in the distribution system may negate all source water protection initiatives provided by the community. Finally, the Illinois EPA recommends that the city continue to evaluate additional source water protection management options to address the regulatory and non-regulatory land use activities within the community wells' recharge area.

### **How is My Water Treated and Purified?**

The treatment process consists of a series of steps. First, raw water is pumped from Lake Decatur to the South Water Treatment Plant. Chlorine dioxide is added to destroy bacteria and protozoan that may be in the raw water. The water then goes to mixing tanks where aluminum sulfate and calcium hydroxide are added for softening. The addition of these substances causes small particles to adhere to one another (called floc) making them heavy enough to settle into basins from which the floc is removed. Powdered activated carbon is also added for taste and odor control. Fine particles that remain after the basin treatment are removed in the filtration process, which consists of layers of sand and anthracite. After filtration, chlorine is added to maintain the disinfection process through the distribution system. Lastly, a small amount of fluoride is added to prevent dental decay. Water pressure is maintained in the distribution system to prevent the intrusion of any contaminants into our water mains.

### **Cryptosporidium in Drinking Water**

Cryptosporidium is a microbial parasite found in surface water throughout the world. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. The monitoring of our raw water and finished water indicates the presence of these organisms only in the raw water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. Steps taken to reduce this organism from entering Lake Decatur are part of ongoing watershed management programs.

### **Possible Contaminants**

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. 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 USEPA's Safe Drinking Water Hotline. (1-800-426-4791)

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 can dissolve naturally occurring minerals and radioactive materials, and pick up substances resulting from the presence of animals or human activity. Substances 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 wildlife.
- **Inorganic contaminants**, such as salts and metals, which may 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 organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff and septic system
- **Radioactive contaminants**, which may be naturally occurring or be the result of oil and gas production and mining activities.

### **Special Health Information**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

### **What Are The Health Effects of Lead?**

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. We 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>.

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken. We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality.

**Decatur's Regulated Contaminants Detected:**

Regulated Substances	Substance (Units of Measure)	Year Sampled	MCL [MRDL]	MCLG [MRDLG]	Amount Detected	Range (low-high)	Violation	Typical Source
	Arsenic (ppb)	2015	10	0	1.2	1.2-1.2	No	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
	Barium (ppm)	2016	2	2	0.026	0.026-0.026	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
	Chlorine (ppm)	12/31/2016	[4]	[4]	1	0-1	No	Water additive used to control microbes
	Chlorite (ppm)	2016	1	0.8	0.43	0.3 - 0.43	No	By-product of drinking water disinfection
	Fluoride (ppm)	2016	4	4	0.7	0.604 - 0.699	No	Erosion of natural deposits, Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
	Haloacetic Acids [HAA5]-Stage 2 (ppb)	2016	60	No goal for the total	15	1.07 - 17.5	No	By-product of drinking water disinfection
	Nitrate(1) (ppm) [measured as Nitrogen] - Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.	2016	10	10	8	2.19 - 7.9	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
	TTHMs [Total Trihalomethanes] (ppb)	2016	80	No goal for the total	48	9.62 - 82.9	No	By-product of drinking water disinfection
	Total Coliform Bacteria (% positive samples)	2015	5% of monthly samples are positive	0	1.2	NA	No	Naturally present in the environment
	Total Organic Carbon (2) (ppm)	2016	TT	NA	1.92	0.86 - 1.92	No	Naturally present in the environment
	Turbidity (3) (NTU)	2016	TT	NA	0.19	0.19	No	Soil runoff
	Turbidity (Lowest monthly percent of samples meeting limit)	2016	TT=95% of samples <0.3 NTU	NA	100	NA	No	Soil runoff

**Tap water samples were collected for lead and copper analyses from sample sites throughout the community.**

Substance (Units of Measure)	Year Sampled	AL	MCLG	Amount Detected	Sites above AL/ Total Sites	Violation	Typical Source
Copper	2014	1.3	1.3	0.029	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	2014	15	0	3.1	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

**State Regulated Substances**

Substance (Units of Measure)	Year Sampled	MCL [MRDL]	MCLG [MRDLG]	Amount Detected	Range (low-high)	Violation	Typical Source
Sodium (4) (ppm)	2016	NA	NA	6.2	6.2 - 6.2	No	Erosion of naturally occurring deposits; Used in water softener regeneration

**Secondary Substances**

Substance (Units of Measure)	Year Sampled	SMCL	MCLG	Amount Detected	Range (low-high)	Violation	Typical Source
Sulfate (ppm)	2015	250	NA	34	34-34	No	Runoff/leaching from natural deposits; Industrial wastes

**Mt. Zion's Regulated Contaminants Detected**

<b>Coliform Bacteria</b>						
Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest Number of Positive	Fecal Coliform of E. Coli Maximum Contaminant Level	Total Number of Positive E. Coli or Fecal Coliform	Violation	Likely Source of Contamination
0	5% of monthly samples are positive	0		0	No	Naturally present in the environment

**Lead and Copper**  
**Definitions:**  
**Action Level Goal (ALG):** The level of a contaminant in the drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.  
**Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow

Lead and Copper	Date sampled	MCLG	Action Level (AL)	90th percentile	Number of sites over AL	Units	Violation	Likely source of contamination
Lead	7/18/2012	0	15	0	1	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.

**Water Quality Test Results**

Maximum Contaminant Level Goal (MCLG):

The level of a contaminant in the drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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 Residual Disinfectant Level Goal (MRDLG):

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (MRDL):

The 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.

<b>Definitions:</b>	<b>The following tables contain scientific terms and measures, some of which may require explanation</b>					
ppb:	Micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water					
na:	Not applicable					
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples					

<b>Regulated Contaminants</b>								
Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2016	0.7	0.3-1	MRDLG = 4	MRDL = 4	ppm	No	Water additive used to control microbes
Halocetic Acids (HAA5) *	2016	14	7.5-17.9	No goal for the total	60	ppb	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	2016	53	23-71.5	No goal for the total	80	ppb	No	By-product of drinking water disinfection

<b>Violations Table</b>						
<b>CCR Report</b>						
None						

Violation Type	Violation Begin	Violation End	Violation Explanation

Corrective Actions	Date	Violation	Description