

## ANNUAL DRINKING WATER QUALITY REPORT

### CITY OF OLNEY WATER TREATMENT PLANT

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of our water. Our water source is a surface supply, East Fork Lake, a 950-acre man made reservoir located North-East of Olney. The treatment facility is located on West Mack Avenue, just outside the Olney city limits.

Due to the largest portion of the watershed area of our source supply being farm fields, it is more likely that certain contaminants could be detected in our supply. We perform many tests every year to ensure levels of contaminants remain below recommended levels.

This report shows our water quality and what it means.

If you have any questions about this report or your water utility, please contact Frank Bradley or an operator on duty at the Olney Water Treatment Plant at 392-3741. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled city council meetings. They are held on the 2<sup>nd</sup> and 4<sup>th</sup> Monday of each month beginning at 7:00pm in the council chambers at City Hall, 300 South Whittle Avenue.

The City of Olney Water Treatment Plant routinely monitors for constituents in your drinking water according to Federal and State laws. These tables show the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2016. **If a date is listed under a level detected, then that is the most recent testing done in accordance with E.P.A. regulations.** All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these constituents does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791. In these tables, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we have provided the following definitions:

Action Level Goal (ALG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Action Level (AL) – The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

Parts per million (ppm) or Milligrams per liter (mg/l) – or one ounce in 7,350 gallons of water.

Parts per billion (ppb) or Micrograms per liter – or one ounce in 7,350,000 gallons of water.

Picocuries per liter (pCi/L) – A measure of radioactivity in water.

Nephelometric Turbidity Units (NTU) – A measure of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.

Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.

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.

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 Goal (MRDLG) – The level of a drinking water disinfectant below which there are 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.

Average (AVG) – Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Not Applicable (N/A)

## 2016 DETECTED CONTAMINANTS

Contaminant	Violation Y/N	Highest Level Detected	Range of Detection	Unit of Measure	MCLG	MCL	Likely Source of Contamination
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### Inorganic Contaminants

Barium	N	0.024	0.024-0.024	ppm	2	2	Discharge of drilling waste, metal refineries, and erosion of natural deposits
Nitrate (As Nitrogen)	N	0.32	0.32 – 0.32	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits
Fluoride	N	0.8	0.8 - 0.8	ppm	4	4	Erosion of natural deposits; Water additive to promote strong teeth; discharge from fertilizer and aluminum factories
Sulfate	N	37	37 - 37	ppm	N/A	N/A	Erosion of natural deposits
Sodium	N	18	18 - 18	ppm	N/A	N/A	Erosion of natural deposits. Used as a water softener.
Zinc	N	0.028	0.028 – 0.028	ppm	5	5	Erosion of natural deposits, discharge from metal refineries

### Disinfectants / Disinfection By-Products

TTHM Total Trihalomethanes	N	46	33.4 – 59.4	ppb	N/A	80	By-Product of drinking water chlorination
Total Haloacetic acids (HAAs)	N	10	0 - 21	ppb	N/A	60	By-Product of drinking water chlorination
Chloramines	N	2.4	1.7 – 3	ppm	4	4	Water additive used to control microbial growth

### Radioactive Contaminants

Combined Radium 226/228 04/02/2014	N	1.609	1.609 – 1.609	pCi/L	0	5	Erosion of natural deposits
Gross Alpha excluding radon and uranium 04/18/2011	N	0.215	0.215-0.215	PCi/L	0	15	Erosion of natural deposits

### Lead and Copper

	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper 08/21/2014	1.3	1.3	0.067	0	ppm	N	Erosion of natural deposits, leaching from wood preservatives, corrosion of household plumbing systems
Lead 08/21/2014	0	15	6.8	1	ppb	N	Corrosion of household plumbing systems, erosion of natural deposits

<b>Coliform Bacteria</b>						
Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	1		1	N	Naturally present in the environment.

<b>Turbidity</b>				
	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.141	N	Soil runoff
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff

<b>Total Organic Carbon</b>
The percentage of Total Organic Carbon (TOC) removal was measured each month and our system met all TOC requirements set.

## **ABOUT THE DATA**

### **ALPHA EMITTERS**

Sampling for alpha emitters is done to determine the radioactivity of water. The EPA considers 15pCi/L to be a level of concern for alpha particles.

### **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 are responsible for providing high quality drinking water, but 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>.

### **TURBIDITY**

Turbidity is the measure of cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

### **UNREGULATED CONTAMINANTS**

A MCL for these contaminants has not been established by either state or federal regulations, nor do they have mandatory health effects language. The purpose for monitoring these contaminants is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

## FLUORIDE

Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride level of 0.7 mg/l.

## SODIUM

There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If the level is greater than 20 mg/l, and you are on a sodium-restricted diet, you should consult a physician.

## SOURCE WATER ASSESSMENT

The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please call an operator at the Water Treatment Plant at 618-392-3741. To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

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.

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 healthcare providers. EPA/CDC 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 1-800-426-4791.

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 can dissolve naturally occurring minerals and radioactive materials. The water can also pick up any substances resulting from the presence of animals or 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 may be naturally occurring or result from urban storm water run-off, 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 run-off, 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 run off and septic systems.

RADIOACTIVE CONTAMINANTS, which may 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, USEPA prescribes regulations that 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.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

In our continuing efforts to maintain a safe and dependable water supply, it may be necessary to make improvements to our water system. The cost of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

