

# City of McLeansboro

## 2016 Water Quality Report

### Introduction

This year, as in years past, the tap water produced by the Rend Lake Conservancy District Intercity Water Plant (Plant) and distributed by the City of McLeansboro met all USEPA and Illinois EPA drinking water health standards. The Plant vigilantly safeguards its surface water supply and we must report the plant had **Routine monitoring Violations** from 07/1/2016 to 07/31/2016. The City of McLeansboro had no **Violations** of a contaminant level or of any other water quality standard in 2016. This report summarizes the quality of water that the City received from the Plant and also the quality of your water as it traveled through the City's distribution system. Also, it will discuss where the water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with this information because it is important to us that you are informed about the water you are receiving.

If you have any questions about this report or concerns about your water system, please contact **Mr. Scott Schuster, Superintendent**, at (618) 643-2723. Please feel free to attend any regularly scheduled City Hall meeting. Meetings are held at City Hall the second Tuesday of each month at 7:00 P.M.

### Water Source

The city buys the water from the Rend Lake Intercity Water System. Their system treats relatively high-quality surface water pumped from the intake structure at Rend Lake. The intake structure is located along the southeast portion of the lake adjacent to the Plant.

The source water assessment for our supply has not been completed by the Illinois EPA. It is anticipated that this assessment will be performed within the next three years. Information provided by this assessment will indicate any contaminant sources of concern in the vicinity of Rend Lake and how it relates to the quality of water produced by the Plant.

### Health Issues

Some people may be more vulnerable to contaminants in drinking water. Immuno-compromised people 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 health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other

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 at 800-426-4791.

### Contaminant Sources

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 material, and can pick up substances resulting from the presence of animals or from human activity. Possible contaminants consist of:

- 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 stormwater 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 stormwater 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 stormwater runoff 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.

In addition to this informational section of the Water Quality Report, we have included several tables for your review. The tables will illustrate the contaminants that were detected in the Rend Lake Intercity Water System distribution lines and also the contaminants that the Village detected in their own distribution lines. Please note that neither system had a violation of a contaminant level.

# Annual Drinking Water Quality Report

MC LEANSBORO

IL10650200

Annual Water Quality Report for the period of January 1 to December 31, 2016

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

The source of drinking water used by MC LEANSBORO is Purchased Surface Water

For more information regarding this report contact:

Name SCOTT SCHUSNER

Phone (618) 643-2723

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo o hable con alguien que lo entienda bien.

## Source of Drinking Water

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 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 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 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.

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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

In order to ensure that tap water is safe to drink, 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 transplant, 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 and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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>.

## Source Water Assessment

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by City Hall or call our water operator at (618) 643-2723. 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://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

Source of Water: REND LAKE INTER-CITY WATER SYSTEM Illinois EPA considers all surface water sources of public water supply to 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.

2016 Regulated Contaminants Detected

Lead and Copper

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: 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	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	09/03/2015	1.3	1.3	0.025	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

Water Quality Test Results

Definitions:

Avg:

Level 1 Assessment:

Level 2 Assessment:

Maximum Contaminant Level or MCL:

Maximum Contaminant Level Goal or MCLG:

Maximum residual disinfectant level or MRDL:

Maximum residual disinfectant level goal or MRDLG:

na:

mrem:

The following tables contain scientific terms and measures, some of which may require explanation.

Regulatory compliance with some MCLs are based on running annual average of monthly samples.

A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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.

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.

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.

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.

not applicable.

millirems per year (a measure of radiation absorbed by the body)

**Water Quality Test Results**

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	12/31/2016	2.4	2.3 - 2.6	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Halacetic Acids (HAA5)	2016	25	19.4 - 31.2	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2016	38	24.1 - 58.5	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

2016 Regulated Contaminants Detected

REND LAKE INTERCITY WATER

Lead and Copper

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: 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	# Sites Over AL	Units	Violation	Likely Source of Contamination
Lead	08/06/2015	0	15	9.3	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Water Quality Test Results

Definitions:  
 Avg: The following tables contain scientific terms and measures, some of which may require explanation.  
 Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Level 1 Assessment: A level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level or 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 Contaminant Level Goal or 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 residual disinfectant level or 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.

Maximum residual disinfectant level goal or 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.

na: not applicable.  
 mrem: millirems per year (a measure of radiation absorbed by the body)

## Water Quality Test Results

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.



**Regulated Contaminants**

Disinfectants and By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	12/31/2016	3.5	2.7 - 3	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Chlorite	2016	0.42	0.18 - 0.42	0.8	1	ppm	N	By-product of drinking water disinfection.
Halooacetic Acids (HAA5)	2016	23	16.8 - 28.8	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2016	45	3.1 - 47.6	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
<b>Inorganic Contaminants</b>	<b>Collection Date</b>	<b>Highest Level Detected</b>	<b>Range of Levels Detected</b>	<b>MCLG</b>	<b>MCL</b>	<b>Units</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>
Arsenic	2016	1	0.959 - 0.959	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2016	0.0209	0.0209 - 0.0209	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2016	0.6	0.572 - 0.572	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Sodium	2016	19	19 - 19			ppm	N	Erosion from naturally occurring deposits; Used in water softener regeneration.
<b>Radioactive Contaminants</b>	<b>Collection Date</b>	<b>Highest Level Detected</b>	<b>Range of Levels Detected</b>	<b>MCLG</b>	<b>MCL</b>	<b>Units</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>

Combined Radium 226/228 01/16/2014 0.26 0.26 - 0.26 0 5 pCi/L N Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides

Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
2016	0.53	0 - 0.53	3	3	ppb	N	Runoff from herbicide used on row crops.
2016	2.5	0 - 2.5	0	6	ppb	N	Discharge from rubber and chemical factories.

**Turbidity**

Highest single measurement	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
1 NTU	1 NTU	0.31 NTU	N	Soil runoff.
Lowest monthly & meeting limit	0.3 NTU	100%	N	Soil runoff.

Information Statement: 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.

**Total Organic Carbon**

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

Violations Table

Chlorite

Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (DBP), MAJOR	07/01/2016	07/31/2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.