



# Annual Drinking Water Quality Report for Calendar Year 2015

## City of Le Roy

Before we begin listing our unique water quality characteristics, here are some important facts you should know to have a basic understanding of drinking water in general.

### **Sources 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.

Our source of water comes from **Ground Water: Well #4 (40022) 710 N. White, Well #6 (40024) W. School Street, Well #8 (40026) N. Hemlock**

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 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.

### **Other Facts about Drinking Water**

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, USEPA 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 and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Please review this annual water quality report, which outlines information applicable to our local water system. This document conforms to the regulations under the Safe Drinking Water Act, requiring water utilities to provide detailed water quality information to each of its customer's annually. A copy of this report and information on regularly scheduled council meetings can be picked up at Le Roy City Hall, 207 S. East Street, Le Roy, IL 61752 or contact Corey Edgington – Public Works Assistant Superintendent at 1-309-275-3901.

### **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 Public Works Assistant Superintendent at 1-309-962-3901. 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>.

To Determine Le Roy's susceptibility to groundwater contamination, a Well Site Survey, published in 1991 by the Illinois EPA, and Source Water Protection Plan were reviewed. Based on the information contained in these documents, eight potential sources of groundwater contamination are present that could pose a hazard to groundwater pumped by the Le Roy community water supply wells. These include store/sales, three below ground fuel storages, an implement sales/service, a grain elevator, an auto repair, and a construction demolition co. Based upon this information, the Illinois EPA has determined that Le Roy Wells #4, #6, and #8 are not susceptible to IOC, VOC, or SOC contamination. This determination is based on a number of criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data for the wells. In anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that Le Roy's community water supply wells are not vulnerable to viral contamination. This determination is based upon the evaluation of the following criteria during the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper site conditions; there is a hydrogeologic barrier that restricts pathogen movement; all potential routes and

sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and the sanitary survey of the water supply did not indicate a viral contamination threat. However, having stated this, the U.S. EPA is proposing to require States to identify systems in karst, gravel and fractured rock aquifer systems as sensitive. Water systems utilizing these aquifer types would be required to perform routine source water monitoring. Because the community’s wells are constructed in a confined aquifer, which should provide an adequate degree of protection to prevent the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in the vulnerability determination.

2015 Regulated Contaminants Detected

The next several tables summarize contaminants detected in your drinking water supply.

Here are a few definitions and scientific terms which will help you understand the information in the contaminant detection tables.

AL	Action Level: The concentration of a contaminant that triggers treatment or other required actions by the water supply.
Avg	Regulatory compliance with some MCLs is based on running annual average of monthly samples.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: 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.
MRDL	Maximum Residual Disinfectant Level: The highest level of a drinking water disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal: 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.
N/A	Not Applicable
ppb	parts per billion or micrograms per liter (ug/L) - or one ounce in 7,350,000 gallons of water.
ppm	parts per million or milligrams per liter (mg/L) - or one ounce in 7,350 gallons of water.
Pci/L	Picocuries per liter (a measure of radioactivity)

Coliform Bacteria	MCLG	Total Coliform MCL	Highest Number of Positive Samples	Fecal Coliform or E. coli MCL	Total No. of Positive E. coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
	0	MCL: 1 positive monthly sample (for systems that collect < 40 samples/month).	10	Fecal Coliform or E. Coli MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive	0	Yes	Naturally present in the environment

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	th 90 Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2015	1.3	1.3	0.31	0	ppm	NO	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	2015	0	15	7.6	1	ppb	NO	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 City of Le Roy 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
Chlorine	12/31/15	0.7	0.1-0.7	MRDLG=4	MRDL=4	ppm	NO	Water additive used to control microbes.
Total Trihalomethanes (TTHM)	7/8/2015	15	15.26-15.26	N/A	80	ppb	NO	By-product of drinking water disinfection.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Arsenic- While your drinking water meets USEPA standards for arsenic, it does contain low levels of arsenic. USEPA's standard balances the current understanding of arsenics possible health effects against the costs of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.</b>	2015	9	8.1-9	0	10	ppb	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
<b>Barium</b>	07/02/14	0.072	0.072-0.072	2	2	ppm	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
<b>Chromium</b>	07/02/14	12	12-12	100	100	ppb	NO	Discharge from steel and pulp mills; Erosion of natural deposits.
<b>Fluoride</b>	07/02/14	0.884	0.884-0.884	4	4.0	ppm	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
<b>Nitrate (measured as Nitrogen)</b>	08/05/15	0.16	0.16-0.16	10	10	ppm	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Combined Radium 226/228</b>	07/02/14	1.9	1.9-1.9	0	5	pCi/L	NO	Erosion of natural deposits.
<b>Gross alpha excluding radon and uranium</b>	07/02/14	2.31	2.31-2.31	0	15	pCi/L	NO	Erosion of natural deposits.
State Regulated Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Sodium</b> Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician.	07/02/14	190	190-190	N/A	N/A	ppm	NO	Erosion from naturally occurring deposits: Used in water softener regeneration.

<b>Iron</b> This contaminant is not currently regulated by the USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1,000 or more.	07/02/14	0.036	0.036-0.036	1	1	ppm	NO	Erosion from naturally occurring deposits.
<b>Manganese</b> This contaminant is not currently regulated by the USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1,000 or more.	07/02/14	100	100-100	150	150	ppb	NO	Erosion from naturally occurring deposits.
<p>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.</p> <p>Note: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.</p> <p>Note: Due to favorable monitoring history, aquifer characteristics, and inventory of potential sources of contamination, our water supply was issued a vulnerability waiver renewal. Monitoring for Cyanide and SOC's is required only every 9 years and for VOC's only every 6 years.</p>								

#### **Violation Summary Table**

<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Explanation/Health Effects</b>	<b>Corrective Action Taken</b>
MCL (TCR), Monthly	01/01/15	01/31/15	<p>Total coliform bacteria were found in our drinking water during the period indicated in enough samples to violate a standard.</p> <p>Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.</p>	We chlorinated the water system, flushed affected areas, and increased sampling for coliform bacteria.
MCL (TCR), Monthly	05/01/15	05/31/15	<p>Total coliform bacteria were found in our drinking water during the period indicated in enough samples to violate a standard.</p> <p>Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.</p>	We chlorinated the water system, flushed affected areas, and increased sampling for coliform bacteria.
MCL (TCR), Monthly	06/01/15	06/30/15	<p>Total coliform bacteria were found in our drinking water during the period indicated in enough samples to violate a standard.</p> <p>Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.</p>	We chlorinated the water system, flushed affected areas, and increased sampling for coliform bacteria.
Drinking Water Chlorination	11/18/14	12/15/15	<p>Failure to provide adequate chlorination in all parts of the distribution system.</p> <p>We do not know of any cases of contamination. However, until improvements are made, this is an increased chance that disease-causing organisms could contaminate the water supply. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms, however, are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.</p>	The City of Le Roy added a chlorination booster station in the distribution system to correct the issue.