

# City of Roseville 2016 Water Quality Report



The information provided in this report is for the water delivered  
January 1 through December 31, 2016.

## **City of Roseville Water Quality Report for 2016**

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The City of Roseville Public Works Department is pleased to present its 2016 Annual Water Quality Report. As with past years, compliance with all state and federal regulations regarding water quality have been met or exceeded by the water provided. The City of Roseville takes pride in providing you with high quality water and excellent service. The safety and protection of the water system continues to be a top priority.

The information provided in this report is for the water provided January 1 through Dec 31, 2016, and includes details about where your water comes from, what it contains, and how it compares to the standards set by the regulatory agencies. We hope this report will provide the answers to any questions you may have about the drinking water supplied by the City of Roseville. Safe drinking water is essential for our citizens who need to be well-informed to wisely utilize and conserve water resources and support the improvements necessary to maintain the highest quality drinking water possible.

### **Source of Water**

The City of Roseville provides drinking water to its residential and commercial customers via St. Paul Regional Water Services (SPRWS). SPRWS obtains its water from wells in the Prairie Du Chien-Jordan aquifer and the surface water sources of the Chain of Lakes and the Mississippi River. If you want a copy of the entire source water assessment regarding your drinking water call 651-201-4700 or 1-800-818-9318 (and press 5) during normal business hours or view it online at [www.health.state.mn.us/divs/eh/water/swp/swa](http://www.health.state.mn.us/divs/eh/water/swp/swa).

All of this water is piped to the SPRWS Water Treatment Plant in Maplewood where it is treated and tested to meet or exceed all Minnesota Department of Health and Federal drinking water standards. For a more detailed description of SPRWS's water sources, distribution networks, and the treatment process, visit the SPRWS website at <http://www.stpaul.gov/index.aspx?nid=75>

### **Water Quality Monitoring**

SPRWS tests our drinking water daily before it is delivered. The City of Roseville conducts a minimum of 40 additional tests monthly on water samples taken directly from our distribution system. The Minnesota Department of Health also performs additional tests annually.

Roseville's water utility personnel perform annual system maintenance programs that help ensure continued water quality, reliability, and integrity of the distribution system.

## Terms & Abbreviations Used In This Report

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**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.

**MCL**

Maximum Contaminant Level: 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.

**MRDL**

Maximum Residual Disinfectant Level.

**MRDLG**

Maximum Residual Disinfectant Level Goal.

**AL**

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

**90th Percentile Level**

This is the value obtained after disregarding 10 percent of the samples taken that had the highest levels. (For example, in a situation in which 10 samples were taken, the 90th percentile level is determined by disregarding the highest result, which represents 10 percent of the samples.) Note: In situations in which only 5 samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile level.

**Ppb**

Parts per billion, which can also be expressed as micrograms per liter ( $\mu\text{g/l}$ ).

**Ppm**

Parts per million, which can also be expressed as milligrams per liter ( $\text{mg/l}$ ).

**Oocysts/L**—Oocysts/Liter (measurement of the number of *Cryptosporidium* (or *Giardia*) spores).

**Nd** – No detection.

**TT**

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water. The EPA has two requirements: 1) that the maximum level found must be less than 1 NTU, and 2) that the level must be under 0.3 NTU 95% of the time.

**NTU**

Nephelometric Turbidity Unit, used to measure clarity in drinking water.

**N/A**

Not Applicable (does not apply)

## Results of Monitoring

The table below includes substances that were detected in trace amounts in 2016.

*No Contaminants were detected at levels that violated federal drinking water standards.*

Detected Substance	Meets Standards?	Amount Detected*	Allowed (MCL)	MCLG	Typical Source of Substance
2, 4-D (ppb)	Yes	Average = N/A Range (2016): N/A	70	70	Runoff from herbicide used on row crops.
Cryptosporidium (oocysts/L)	Yes	Average = .81 Range (2016): nd - .098	N/A	N/A	Human and animal fecal waste.
Fluoride (ppm)	Yes	Average = .81 Range (2016): 0.79- .82	4	4	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Haloacetic Acids (HAA5) (ppb)	Yes	Average = 33.45 Range (2016): 17.7-37.6	60	0	By-product of drinking water disinfection.
Nitrate (as Nitrogen) (ppm)	Yes	Average = .32 Range (2016): N/A	10.4	10.4	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Trihalomethanes (Total TTHM) (ppb)	Yes	Average = 40.2 Range (2016): 29.7- 51.3	80	0	By-product of drinking water disinfection.
Turbidity (NTU)	Yes	Max 0.093 (limit met 100%)**	TT	N/A	Turbidity is a measure of the clarity of the water. Soil runoff.
Chlorine (ppm)	Yes	*****Average = 1.03 ****Range: .1- 2.2	4 MRDL	4 MRDLG	Water additive used to control microbes.
Copper (ppm) (9/6/2016)	Yes	90% level: .06 (0 out of 30 sites over AL)	Action Level = 1.3	1.3	Corrosion of home plumbing; erosion of natural deposits
Lead (ppb) (9/6/2016)	Yes	90% level: 3.0 (0 out of 30 sites over AL)	Action Level = 15	0	Corrosion of home plumbing; erosion of natural deposits

\*This is the value used to determine compliance with federal standards. It sometimes is the highest value detected and sometimes is an average of all the detected values. If it is an average, it may contain sampling from a previous year.

\*\*Monthly percentage of samples meeting the turbidity limits.  
The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by the U.S. Environmental Protection Agency.

\*\*\*\* Highest and Lowest Monthly Average.

\*\*\*\*\* Highest Quarterly Average.

If present, infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

The City of Roseville is responsible for providing high quality drinking water, but cannot control the variety of materials used in home 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>.

### **Compliance with National Primary Drinking Water Regulations**

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.

In order to ensure that tap water is safe to drink, the U. S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

### ***Special Health Information***

*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 are available from the Safe Drinking Water Hotline at 1-800-426-4791.*

### **What Else Can Be Found in Our Drinking Water?**

In recent years, several media outlets have addressed the presence of pharmaceutical and other household substances in our drinking water that were previously undetected. So, what is in the water we provide? The above tables list the substances for which we are required to test by the federal Environmental Protection Agency (EPA). You will note that we meet all the EPA standards for safe drinking water. However, the EPA currently does not require testing for pharmaceuticals or household items like caffeine or acetaminophen, (the active ingredient in the over-the-counter drug Tylenol), prescription drugs, insect repellents, and cotinine (derived from nicotine, found in cigarettes). For instance, a 7-ounce cup of coffee contains between 85-100 milligrams (or parts per million) of caffeine. A part per million is equivalent to a minute in two years. The amounts of some of these substances found in drinking water are so low they can be measured in parts per billion – equivalent to one second in 32 years.

When we drink coffee, smoke, take medication, apply lotion, and other products, our bodies break down these substances – but not completely. These substances are excreted or rinsed off our bodies and end up in the sewer system and are then treated at a wastewater facility. From there, the water is released back out into our rivers and streams.

Drinking water treatment plants remove most, but not all of these substances. Any remaining amounts of these compounds are very small. A study by the United States Geological Survey, the Minnesota Pollution Control Agency, and the Minnesota Department of Health conducted in 2000-2002 tested for the presence of organic wastewater compounds at 65 different sites throughout the state, including the water entering and leaving the SPRWS treatment plant. Organic wastewater compounds include pharmaceuticals, antibiotics, hormones/sterols, and household, industrial, and agricultural use compounds. Detected concentrations of these compounds from around the state averaged less than 3 parts per billion.

### **Keep Prescription Drugs Out of the Water Supply**

#### **Don't flush your old prescriptions down the toilet!**

The Minnesota Pollution Control Agency has these recommendations for disposing of old prescriptions and over-the-counter medications:

Leave the prescription in the original bottle, but scratch out personal identifying information on the label.

To discourage consumption, depending on the type of prescription, either add water to pills or capsules to dissolve them, or add table salt, flour, etc., to liquids.

Then, either tape blister packs with duct tape or tape the container shut. Finally, put the container inside another bag or container, and throw it away in your garbage can.

The scientific community has been doing research on pharmaceuticals in water for several years. As yet, there are no monitoring requirements for these substances. According to the EPA, the risks posed to humans are unknown, largely because the concentrations are so low. There are no known human health effects from such low-level exposures in drinking water. A study by the American Water Works Association's Research Foundation suggests the average person would need to drink between hundreds to thousands of 8-ounce glasses of water every day over a lifetime to increase the risk for cancer from these substances. Even with the small amounts found in our water, we should look at ways to reduce our own contributions of these substances to our environment. Obviously, we cannot ask people to stop taking their medications, but the sidebar to the right above provides some advice on how we can minimize risks to our drinking water that may be caused by the pharmaceuticals we use. Ultimately, the more we do to stop compounds from getting into our water, the less we will have to worry about trying to remove them.

**Want to Know More?**

If you have any questions about Roseville's drinking water, please call the Roseville Utility Superintendent Paul Coone at 651-792-7053. If you have a water emergency after hours, please call the Ramsey County Sheriff's Office at 651-767-0640. City personnel will be notified to respond to your call.

For training and educational opportunities in the Water/Wastewater industry, please check the following organizations:

**Minnesota Section American Water Works Association**

SPRWS

651-266-6274

<http://www.mnawwa.org>**American Water Works Association**

6666 W Quincy Avenue

Denver, CO 80235

303-794-7711

<http://www.awwa.org>**Minnesota Pollution Control Agency**

520 Lafayette Road, St. Paul, MN 55155-4194

Phone: 651-296-6300

<http://www.pca.state.mn.us>**United States Environmental Protection Agency (EPA)**

Environmental Protection Agency

Ariel Rios Building

1200 Pennsylvania Avenue, N.W.

Washington, DC 20460

(202) 272-0167

<http://www.epa.gov>