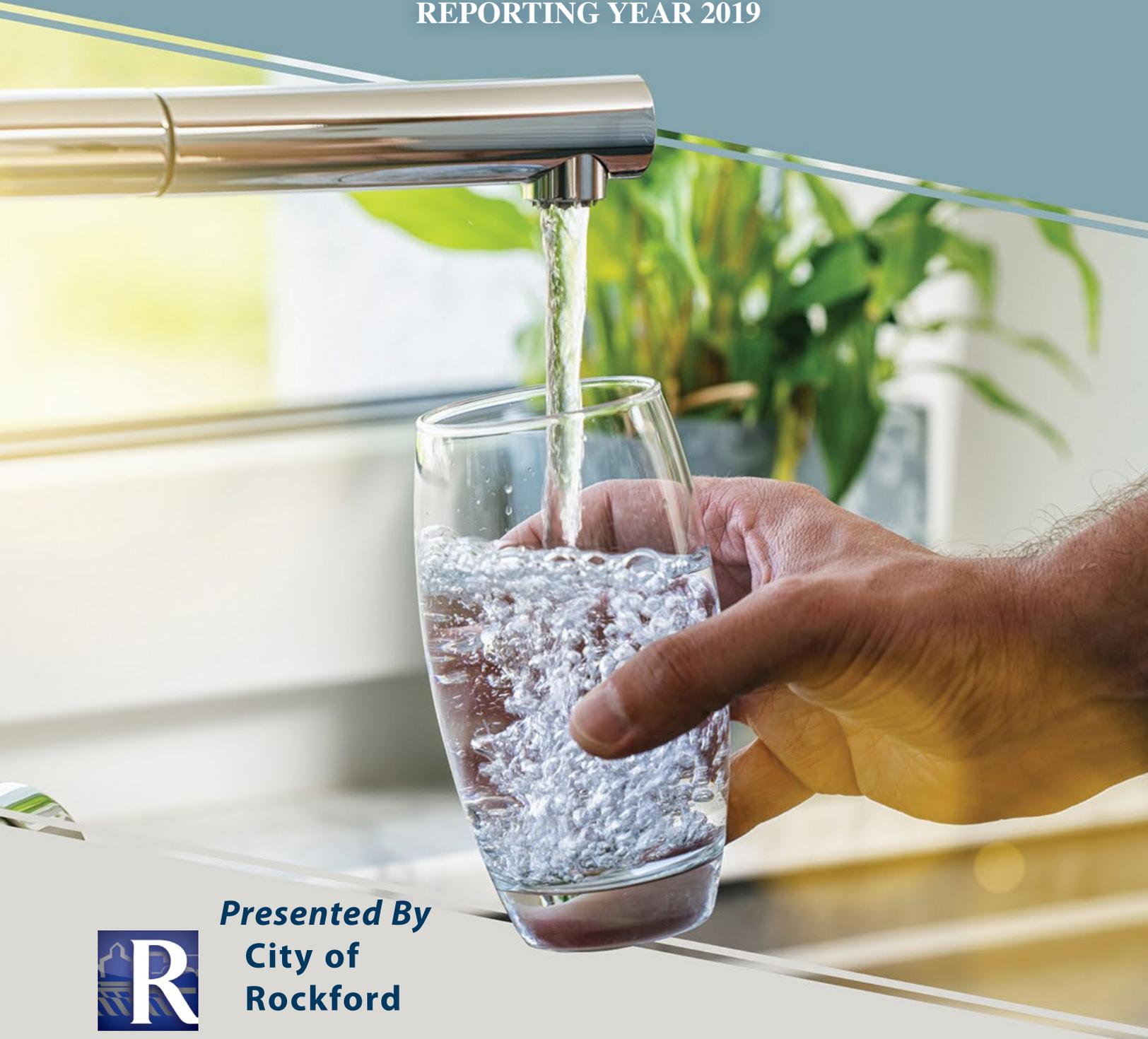


# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



*Presented By*  
**City of  
Rockford**



## Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.



## Source Water Assessment

In 2017 the DEQ performed a source water assessment for the City of Rockford. The resulting plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

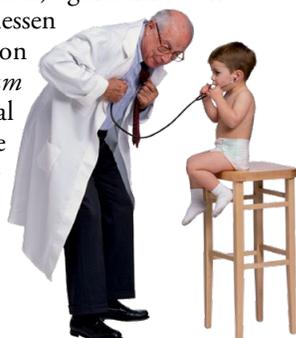
According to the Source Water Assessment Plan, the City of Rockford's source water wells have a "Low" susceptibility to contamination based on our source of water and possible sources of contamination within the wellhead protection area. For more information or a copy of this report, please contact the City Office at (616) 866-1537.

## Community Participation

The public is invited to attend City Council Meetings and voice your concerns about your drinking water. City Council Meetings are on the second Monday of each month, beginning at 7:00p.m., at Rockford City Hall, 7 South Monroe Street, Rockford, Michigan 49341

## Important 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 may 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 at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



## Water Treatment Process

The treatment process starts by pumping raw water from the ground into an aeration unit, where oxygen is introduced into the water. The oxygen oxidizes any dissolved iron found in the water as it travels into a detention tank where the oxidation process is completed. At this point, the iron is ready to be filtered from the water and is distributed into an anthracite carbon filter bed. Once the water passes through the filter, and the iron is removed, the water then enters into a clear well.

An ortho-polyphosphate is added to protect against contaminants like lead and copper from leaching into the water as it moves throughout household plumbing and fixtures. Finally, chlorine is added as a primary and secondary disinfectant to protect the water from pathogens as it travels into your homes or businesses. We carefully monitor the amount of chlorine applied, adding enough chlorine necessary to protect the safety of your water without compromising taste.

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Andy Bilski, Water Plant Superintendent, at (616) 951-7504

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting 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 that 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Information on PFAS

In November of 2019, Rockford's drinking water was tested for per- and polyfluoroalkyl substances (PFAS) at the water plant point of entry into the distribution system. PFAS was not detected. Information on PFAS in Michigan is available through the Michigan DEQ at <https://www.michigan.gov/pfasresponse/>, the Kent County Health Department at <https://www.accesskent.com/Health/PFAS/>, and the U.S. EPA at <https://www.epa.gov/pfas>.

## Lead Service Lines

Water service lines in a distribution system can be made of various materials including copper, galvanized steel, lead, and plastic. The different materials were used by contractors over the course of time; galvanized and lead were commonly used before the 1980s and copper and plastic were mainly used after the 1980s until present day. A preliminary Distribution System Materials Inventory (DSMI) was turned into the State of Michigan EGLE in January of 2020. The primary focus of the preliminary DSMI was to use existing records to identify known lead service lines, galvanized steel previously connected to lead, or service lines of unknown material; thereby providing important information for planning service line verification and replacement efforts. The complete DSMI, which is due in 2025, will require characterization of all service

line materials (lead, galvanized, copper, and plastic). The preliminary report concluded that Rockford's distribution has a total of 2,351 service lines; 1,399 service lines are made of unknown material; while 952 service lines have been reported as containing neither lead nor galvanized steel previously connected to lead. If any lead service lines are identified during field verification, the property owner will be notified along with a plan to replace.

## Where Does My Water Come From?

The City of Rockford customers are fortunate because we enjoy a water supply from 3 wells, located on the S.E. side of the City. The Rockford Water Treatment Plant draws water from an aquifer more than 100 feet below the surface of the earth, and pumps it directly into the on-site treatment facility.

From the Treatment Facility the water then travels into the distribution system. The Distribution system comprises approximately 35 miles of water mains, over 2,000 water meters, and over 400 fire hydrants. The City has 4 elevated water storage tanks with capacities ranging from 200,000 gallons to 500,000 gallons. These tanks provide the City with water pressure and ample water for fire suppression. Rockford also operates and maintains a booster pumping station to provide water for the Hightower water tank, water pressure, and fire suppression to the Rockford Highlands. In addition to providing water to the City of Rockford, we also provide water to parts of Algoma, Cannon, and Courtland Townships.

In 2019, the water treatment plant supplied 321 million gallons of water to approximately 7,200 consumers. Our maximum water produced in a single day was 1.604 million gallons, while the minimum amount of water produced in a single day was 0.355 million gallons. The average amount of water produced per day was 0.879 million gallons.

We remain vigilant in delivering the best-quality drinking water

## What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection.

For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

## Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not themselves pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at such times. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.



## Lead in Home Plumbing

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 at (800) 426-4791, or on the U.S. EPA's Web site at <http://water.epa.gov/drink/info/lead/index.cfm>.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show those substances that were detected in our water. (A complete list of all our analytical results is available upon request.) Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring 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.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine <sup>1</sup> (ppm)	2019	[4]	[4]	0.47	0.21–0.86	No	Water additive used to control microbes
Combined Radium (pCi/L)	2019	5	0	1.09 +/-0.48	NA	No	Erosion of natural deposits
Haloacetic Acids [HAAs] (ppb)	2019	60	NA	5.51	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2019	10	10	0.292	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2019	80	NA	14.6	NA	No	By-product of drinking water disinfection

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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2019	1.3	1.3	0.4	0.0–0.578	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2019	15	0	2	0–2.6	0/20	No	Lead services lines; Corrosion of household plumbing systems including fittings and fixtures; Erosion of natural deposits

### SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2019	250	NA	25.4	NA	No	Runoff/leaching from natural deposits
Fluoride <sup>2</sup> (ppm)	2019	2.0	NA	0.57	0.36–0.72	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Iron <sup>3</sup> (ppb)	2019	300	NA	33	0.0–170	No	Leaching from natural deposits; Industrial wastes
pH <sup>3</sup> (Units)	2019	6.5-8.5	NA	7.7	7.0–8.0	No	Naturally occurring
Sulfate (ppm)	2019	250	NA	118	NA	No	Runoff/leaching from natural deposits; Industrial wastes

### UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Hardness [CaCO <sub>3</sub> ] <sup>4</sup> (ppm)	2019	376	310–420
Sodium (ppm)	2019	16.8	NA

<sup>1</sup> Based on the disinfectant residual running annual average of the bacteriological sample sites

<sup>2</sup> The U.S. EPA lowered the standard for fluoride residuals in drinking water to 0.70 ppm. In 2012, the City of Rockford stopped adding fluoride to the drinking water because the City's groundwater source naturally contains fluoride.

<sup>3</sup> Based on a monthly average.

<sup>4</sup> Based on a monthly average, equivalent to 22 grains per gallon.

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

**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.

**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 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.

NA: Not applicable

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.