

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2020



Presented By
City of Rockford



Quality First

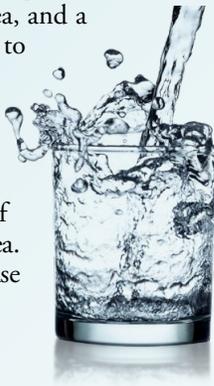
Once again, we are pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2020. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

Source Water Assessment

In 2017, the DEQ performed a source water assessment for the City of Rockford. This 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.



Water Treatment Process

The treatment process starts by pumping raw water from the ground directly into an aeration unit where oxygen is introduced into the water. The oxygen oxidizes any dissolved iron 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 out by sending the water through an anthracite carbon filter bed. Once the water passes through the filter and the iron is removed, the water enters into a clear well.

An ortho-polyphosphate is then 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.

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>.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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>.



Community Participation

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

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.

Lead Service Lines

Water service lines in a distribution system can be made of various materials including copper, galvanized steel, lead, and plastic. These different materials were used by contractors over the course of time; galvanized and lead were commonly used before the 1980's, and copper and plastic have mainly been used from the 1980's until present day. A preliminary Distribution System Materials Inventory (DSMI) was turned into the State of Michigan Environment, Great Lakes, and Energy (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 steel, 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 produces drinking water from 3 wells located in the S.E. corner 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 and into your homes, businesses, irrigation systems, and fire protection systems. The Distribution system is composed of approximately 40 miles of water main, nearly 3,000 water meters, over 400 fire hydrants, a booster pumping station, and 4 water towers. The City's 4 water towers range in capacity from 200,000 gallons to 500,000 gallons. These elevated tanks provide the City with water pressure and volume for daily use as well as fire suppression. In addition to providing water to the City of Rockford, we also provide water to parts of Algoma, Cannon, and Courtland Townships.

In 2020, the water treatment plant supplied 345 million gallons of water to approximately 7,200 consumers. Our maximum water produced in a single day was 1.881 million gallons, while the minimum amount of water produced in a single day was 0.320 million gallons. The average amount of water produced per day was 0.942 million gallons.

Information on PFAS

In January 2021, 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/>, from the Kent County Health Department at <https://www.accesskent.com/Health/PFAS/>, and the U.S. EPA at <https://www.epa.gov/pfas>.



Test Results

We are pleased to report that your drinking water meets or exceeds all federal and state requirements. Testing for contaminants is done on a very strict sampling schedule. Here, we show the 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 ¹ (ppm)	2020	[4]	[4]	0.49	0.27–0.93	No	Water additive used to control microbes	
Combined Radium (pCi/L)	2019	5	0	1.09	0.51–1.57	No	Erosion of natural deposits	
Haloacetic Acids [HAAs] (ppb)	2020	60	NA	5.58	NA	No	By-product of drinking water disinfection	
Nitrate (ppm)	2020	10	10	0.313	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	
TTHMs [Total Trihalomethanes] (ppb)	2020	80	NA	9.42	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)	2020	1.3	1.3	0.3	0.0–0.4	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits
SECONDARY SUBSTANCES								
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE	
Chloride (ppm)	2020	250	NA	22.1	NA	No	Runoff/leaching from natural deposits	
Fluoride ² (ppm)	2020	2.0	NA	0.57	0.38–0.76	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories	
Iron ³ (ppb)	2020	300	NA	30	0.0–180	No	Leaching from natural deposits; Industrial wastes	
pH ³ (Units)	2020	6.5–8.5	NA	7.8	7.5–8.0	No	Naturally occurring	
Sulfate (ppm)	2020	250	NA	166	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 ₃] ⁴ (ppm)	2020	369	308–412					
Sodium (ppm)	2020	15.5	NA					

¹ Based on the disinfectant residual running annual average of the bacteriological sample sites

² 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.

³ Based on a monthly average.

⁴ 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.

Information on the Internet

The U.S. EPA (<https://goo.gl/TFAMKc>) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Michigan Department of Environmental Quality has a Web site (<https://goo.gl/m3Scbr>) that provides complete and current information on water issues in Michigan, including valuable information about our watershed.

How much emergency water should I keep?

Typically, 1 gallon per person per day is recommended. For a family of four, that would be 12 gallons for 3 days. Humans can survive without food for 1 month, but can only survive 1 week without water.

How long does it take a water supplier to produce one glass of drinking water?

It could take up to 45 minutes to produce a single glass of drinking water.

How many community water systems are there in the U.S.?

About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

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.