

United City of Yorkville Water Department

2020 Annual Drinking Water Quality Report

We are pleased to present to you our **Annual Water Quality Report**. This report is designed to inform you about the quality of our water and the services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to assuring the quality of our water.

The Water Department has four wells, located in well house structures, where we draw water, then add chlorine and polyphosphates. The wells use ion exchange water treatment facilities to soften water and remove radium. Chlorine is used to disinfect any possible contamination and polyphosphates work to stabilize water quality and minimize color, scale, deposits, corrosion, and chlorine demand in water treatment. Each well draws water from the Galesville and St. Peter Sandstone aquifers. These are ground formations that were created by the glaciers many millions of years ago. When the glaciers receded, they left behind the deeply buried sand formations where an abundance of water is present. Our four wells have the capacity to pump 4,800 gallons per minute. During the past year the average pumping per day was 1,846,925 gallons.

Our water system is composed of the four deep wells and 153 miles of water mains and that allow the water to travel to homes, schools, restaurants and businesses. The Water Department is operated by 2-Class B (1 with Class A in training) operators, and 3-Class C in training operators.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Public Works at 630-553-4370. We want our valued customers to be informed about their water utility. Please feel welcome to attend any of our regularly scheduled meetings.

The City of Yorkville Water Department routinely monitors for contaminants in your drinking water according to Federal and State Laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2020. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk. Some contaminants were not tested in 2020 so previous testing data was used. If no data is listed the contaminate was tested in 2010. If test results are from an earlier year the test date is listed on the Water Quality Data Table. We will always keep the public health first and foremost in our water practices.

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	08/18/2020	1.3	1.3	0.315	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	08/18/2020	0	15	7.01	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Water Quality Test Results

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

Avg: 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)

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

Water Quality Test Results

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.

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive Total	Fecal Coliform or E. Coli MCL	Total No. of Positive E. Coli or Fecal Coliform Sample	Violation	Likely Source Contaminant
0	0	0	0	0	No	Naturally present in the environment

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2020	0.8	0 - 1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2020	3	0.88 - 2.85	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2020	14	8.42 - 14.39	No goal for the total	80	ppb	N	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
Arsenic	2019	1.06	0 - 1.06	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	7/22/2019	0.0251	0.0251 - 0.0251	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	7/22/2019	8.75	8.75 - 8.75	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride	7/22/2019	0.7	0.7 - 0.7	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Iron	2019	0.144	0 - 0.144		1.0	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Selenium	2019	3.59	0 - 3.59	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Sodium	2019	119	103 - 119			ppm	N	Erosion from naturally occurring deposits. Used in water softener regeneration.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	2020	5	2.8 - 5.29	0	5	pCi/L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	2020	12	2.14-11.9	0	15	pCi/L	N	Erosion of natural deposits.

Violations Table

Consumer Confidence Rule			
The Consumer Confidence Rule requires the community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the systems.			
Violation Type	Violation Begin	Violation End	Violation Explanation
LEAD CONSUMER NOTICE (LCR)	12/30/2020	01/21/2021	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results. Upon notification of the violation mailers with results were sent out immediately the next day to sample site addresses.

2020 Source Water Assessment Summary

The United City of Yorkville (Facility Number 0930250) utilizes four active community water supply wells. The facility distributes 1,846,925 gallons per day on average to an estimated population of 20,613 at 7,435 service connections. Based on information obtained in a Well Site Survey, published in 1987 by the Illinois EPA, nine potential sources or possible problem sites were identified within the survey area of Yorkville wells.

Furthermore, information provided by the Leaking Underground Storage Tank Section of the Illinois EPA indicated several additional sites with ongoing remediation which may be of concern.

The Illinois EPA has determined that the Yorkville Community Water Supply's source water is not susceptible to 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 hydrogeology data on the wells.

Furthermore, in anticipation of the U. S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that the Yorkville Community Water Supply is not vulnerable to viral contamination. This determination is based upon the completed evaluation of the following criteria during the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper site conditions; a hydrogeology barrier exists which prevents 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 out- break; and the sanitary survey of the water supply did not indicate a viral contamination threat. Because the community's wells are constructed in a confined aquifer, which should prevent the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in the susceptibility determination. Hence, well hydraulics were not evaluated for this groundwater supply. The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for Yorkville's wells. These minimum protection zones are regulated by the Illinois EPA. To further reduce the risk to source water, the facility has implemented a well- head protection program, which includes the proper abandonment of potential routes of groundwater contamination and correction of sanitary defects at the water treatment facility. This effort resulted in the community water supply receiving a special exception permit from the Illinois EPA which allows a reduction in monitoring. The outcome of this monitoring reduction has saved the facility considerable laboratory analysis costs.

Further information on our community water supply's source water assessment is available on the USGS web site at <http://www.usgs.gov> or by calling the Groundwater Section of the Illinois EPA at 217-785-4787.

Source of Drinking Water

The source of drinking water (both tap water and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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.

Contaminates 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 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 EPA's Safe Drinking Water Hotline at (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 two 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>.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain safe and dependable water supplies we sometimes need to make improvements that will benefit all our customers. These improvements usually mean construction somewhere in the city. The Water Department would like to say thanks for your understanding.

We at the City are proud to say that we have been a Public Water Supply since 1885 making us one of the oldest in the state and 2020 marks our 135th birthday. The Yorkville Water Department works around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which is the heart of our community, our way of life and our children's future.