

# 2021 Water Quality Report

January 1<sup>st</sup>, 2020 to December 31<sup>st</sup>, 2020

## City of DeKalb Utility Division



Dear Customer,

We are pleased to provide you with this Water Quality Report concerning the quality of water provided to you during the past year.

This report details the source of your water, what it contains and how it compares with EPA and State health standards.

The City of DeKalb's Water Quality Report reflects the commitment and dedication of its employees to provide you with the safest and most reliable water supply. We are pleased to inform you that the City of DeKalb's drinking water meets or surpasses all Federal and State drinking water standards.

Should you have any questions regarding this report, please contact us at (815) 748-2050.

Sincerely,

*Bryan Faivre*

Bryan Faivre  
City of DeKalb  
Utility Division  
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*(Este informe contiene informacion muy importante sobre el agua que usted bebe. Traduscalo o hable con alguien que lo entienda bien.)*

## **Introduction**

The data provided is for calendar year 2020. However, due to EPA monitoring schedules, some contaminants are monitored less frequently. In these cases, the latest available data prior to 2020 will be presented. Any contaminants detected will be noted.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791) or by visiting the EPA's website at [www.epa.state.il.us/water/](http://www.epa.state.il.us/water/).

To ensure that tap water is safe to drink, EPA prescribes regulations that limit the level 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.

## **City of DeKalb - Utility Division**

The City of DeKalb Public Water System is a modern, state-of-the-art water supply. It currently serves a population of over 44,000 residents including Northern Illinois University.

The source of water provided to the residents of DeKalb comes from six deep wells, drawing water from deep sandstone aquifers, and three shallow wells that draw water from sand and gravel aquifers. These two aquifers provide an excellent source of water to the City of DeKalb which is essentially free of contaminants.

Groundwater is treated at one of five ion exchange/iron removal water treatment plants. The treatment process produces a high-quality water supply by reducing the amount of hardness and iron in the water.

Before leaving the treatment plant, the groundwater is treated with chlorine and phosphate to ensure the safety of the water supply within our distribution system. In addition, fluoride is added to the water to promote the development of strong teeth.

DeKalb's water is monitored for microbial, inorganic and organic chemicals, pesticides and herbicides and radioactive contaminants. In 2020, over 12,000 water analyses were performed on your drinking water for over 100 different types of contaminants.

Additional information about the City of DeKalb Water Supply may be obtained by contacting our office at (815) 748-2050 or at [www.cityofdekalb.com](http://www.cityofdekalb.com)

## Facts and Figures:

- Maximum Pumping Capacity = 12.0 MGD (Million Gallons per Day)
- Average Daily Demand = 3.16 MGD
- Maximum Daily Demand = 5.02 MGD
- Maximum Storage Capacity = 5.75 Million Gallons (4 elevated storage tanks)
- Total Finished Water Pumped (2020) = 1.15 Billion Gallons

## FAQ - Frequently Asked Questions:

### *How much water does the average person use per day?*

Estimates vary, but each person uses about 80 – 100 gallons per day. The largest household use of water is to flush the toilet, followed by showers and baths. A typical family of four would normally use about 23 to 27 units of water, or between 17,000 – 20,000 gallons per two-month bill cycle.

### *What does my Utility Bill consist of?*

Your bi-monthly Utility Bill includes charges for water, sewer and refuse pickup. The fee charged for sewer and refuse is governed by the Sanitary District and Lake Shore Recycling Systems respectively. Monies collected for these services will be passed along by the City of DeKalb to these governing bodies.

The current rates for utility services for most residents are as follow:

Water	= \$3.84 per unit (748 gallons) plus a \$13.12 bi-monthly water service fee
Sewer	= \$3.36 per unit (748 gallons) plus a \$13.15 bi-monthly sewer service fee
Refuse	= \$35.70 bi-monthly flat rate

### *Do I need a Water Softener?*

It is really a matter of personal preference whether you need a water softener or not. Although your public water supply is being softened to a hardness of about 7 grains/gallon, the water will not be as soft as a home softening unit would provide. If you are unsure of whether you need a water softener or not, we recommend trying the water without a home softener first. You can always add a softening unit later.

### *Is bottled water better?*

While the EPA regulates water delivered by the public water systems, the Food and Drug Administration (FDA) regulates commercial bottled water which must provide the same protection for public health. While most commercially bottled water is safe and of high quality, one should not assume that just because it comes out of a bottle it is as healthy as the water from your tap.

### *Did you know?*

*The City of DeKalb Utility Division pumps less water today compared to any previous year since 1974. The primary reasons for this include: a significant decrease in accounted water loss (the difference between water pumped vs. water billed), new “low-flow” household water fixtures, a decrease in industrial users, and an increase in water conservation through recapture/reuse.*

### *Detecting Water Leaks*

Water leaks can be costly and can waste a valuable resource. A water leak may add an additional \$500 to \$1,000 in water and sewer charges onto your bi-monthly utility bill. From our experience, 90% of the leaks in residential plumbing systems are found at the toilet tank. **The best way to determine if you have a water leak is to check your water meter.** Most of the current water meters in our system have a flow indicator on the top of the meter (small blue disc). If the blue disc is turning, water is being used somewhere within the home. If you notice the disc turning, but cannot account for the water use, you may potentially have a leak. If you need assistance in locating a potential leak, please call the Utility Division at 815-748-2050.

## Regulated Contaminants Detected in 2020

Coliform Bacteria								
Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive per month (%)	Fecal Coliform or E.Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination		
0	5% of monthly samples	1.9	Routine and Repeat sample are total coliform positive, and one is also E. coli positive	0	N	Naturally present in the environment		
Lead and Copper								
	Date Collected	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	#Sites Over AL	Violation	Likely Source of Contamination	
Copper	June 2019	1.3 ppb	1.3 ppb	0.41 ppm	0	No	Erosion of natural deposits; Leaching word preservatives; Corrosion of house plumbing systems.	
Lead	June 2019	0 ppb	15 ppb	9 ppb	0	No	Corrosion of household plumbing system. Erosion of natural deposits	
Disinfectants & Disinfection By-Products								
Contaminant	Date Collected	Highest Level Detected	Range of Levels Detected	Unit of Measurement	MCLG	MCL	Violation?	Likely Source of Contamination
Total Trihalomethanes – TTHMs	2020	18.5	16.3-18.5	ppb	N/A	80	No	By-product of drinking water chlorination
Total Haloacetic Acids – HAA5	2020	11.98	9.4-11.98	ppb	N/A	60	No	By-product of drinking water chlorination
Chlorine	2020	.9	0.6 – 1	ppm	MRDLG=4	MRDL=4	No	Water additive used to control microbes
Inorganic Contaminants								
Arsenic	2018	2.1	0 – 2.1	ppb	0	10	No	Erosion of natural deposits; Runoff from orchards; Runoff from electronics production waste
Barium	2018	0.83	0.16-0.83	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2018	.786	0.748-.786	ppm	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer discharge
Radioactive Contaminants								
Combined Radium 226 & 228	2020	3.63	0 – 3.63	pCi/L	0	5	No	Erosion of natural deposits
Gross Alpha (excluding radon & uranium)	2020	6.27	0 – 6.27	pCi/L	0	15	No	Erosion of natural deposits
State Regulated Contaminants								
Iron	2018	0.19	0.053-0.19	ppm	N/A	1	No	Erosion from naturally occurring deposits
Sodium	2018	96	51-96	ppm	N/A	N/A	No	Erosion of naturally occurring deposits; used in water softener regeneration
Manganese	2018	42	1.3-42	ppb	150	150	No	Erosion of natural deposits

### 2020 Water Quality Data

#### **Definition of Terms:**

**Maximum Contaminant Level Goal (MCLG):** The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Contaminant Level (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.

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

**U.S.E.P.A.:** “United States Environmental Protection Agency.”

**EPA:** “Environmental Protection Agency.”

**Parts Per Million (ppm):** Indicates the amount of a contaminant measured in parts per million

**Picocuries per Liter (pCi/L):** picoCuries per liter (measurement of radioactivity).

**Parts per Billion (ppb):** Indicates the amount of a contaminant measured in parts per billion

**N/A:** Not Applicable

**Maximum Residual Disinfectant Level (MRDL):** The highest level of disinfectant allowed in drinking water.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLG’s allow for a margin of safety

## *Water Quality Data Table Footnotes*

- Fluoride** Fluoride is added to the water supply to help promote strong teeth. This year marks the 23<sup>rd</sup> consecutive year that the Illinois Department of Public Health has recognized our water system for maintaining optimal fluoride levels in our water supply. Less than 5% of the 1,861 Public Water Supplies in Illinois have maintained optimal levels for 20 or more consecutive years.
- Iron** 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.
- Sodium** There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If the level is greater than 20 ppm, and you are on a sodium-restricted diet, you should consult a physician.
- Lead** 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 DeKalb Utility Division 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

### **Vulnerability Waiver**

Due to favorable monitoring history, aquifer characteristics, and inventory of potential sources of contamination, our water supply was issued a vulnerability waiver for SOC's, VOC's and Cyanide. The vulnerability waiver reduces the amount of testing that is required at each of our five water treatment plants.

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. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (800-426-4791).

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 can dissolve naturally occurring minerals and, in some cases, radioactive material, and pick up substances resulting from the presence of animals or human activity.

Contaminants that have the potential of being present in source water include:

**Microbial contaminants**, such as viruses and bacteria, which may come from sanitary sewers, 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.

## **Source Water Assessment**

Based on information obtained in a Well Site Survey published in 1990 by the Illinois EPA, several potential secondary sources are located within 1,000 feet of several wells. The Illinois EPA has determined that the DeKalb Community Water Supply's source water is not susceptible to contamination. This determination is based on several criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and available hydro-geologic data on the wells. Furthermore, in anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that the DeKalb Community Water Supply is 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 siting conditions; a hydrogeologic barrier exists which should prevent 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. 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 this determination. Hence, well hydraulics were not evaluated for this system ground water supply. For additional information regarding source water assessment, please call the DeKalb Utility Division at 815-748-2050. *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>.*

### **2020 Non-Detected Contaminants**

*The following table includes contaminants monitored for, but not detected in the most recent samples collected by the City of DeKalb – Utility Division.*

#### ***Inorganic Contaminants***

Antimony; Beryllium; Cadmium; Cyanide; Selenium; Thallium; Chromium

#### ***Synthetic Organic Contaminants***

2,4-d; 2,4,5-tp (Silvex); Alachlor; Atrazine; Benzo(a)Pyrene; Carborfuran; Chlordane; Dalapon; Di(2-Ethylhexyl)Adipate; Di(2-Ethylhexyl)Phthalate; Dibromochloropropane; Dinoseb; Diquat; Endothall; Endrin; Ethylene Dirbormide; Heptachlor; Heptachlor Epoxide; Hex-Chlorobenzene; Hexachlorocyclopentadiene; Lindane; Methoxychlor; Oxamyl (Vydate) PCB's- Polychlorinated Biphenyls; Pentachlorophenol; Picloram; Simazine; Toxaphene

#### ***Volatile Organic Contaminants***

Benzene; Carbon Tetrachloride; Chlorobenzene; O-Dichlorobenzene; P-Dichlorobenzene; 1,2-Dichloroethane; 1,1-Dichloroethylene; Cis-1,2-Dichloroethylene; Trans-1,2-Dichloroethylene; Dichloromethane; 1,2-Dichloropropane; Ethylbenzene; Styrene; Tetrachloroethylene; 1,2,4-Trichlorobenzene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; Toluene; Vinyl Chloride

#### ***Unregulated Contaminants***

1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; 1,1-Dichloroethane; 1,1-Dichloropropene; 1,2,3-Trichloropropane; 1,3-Dichloropropane; 2,2-Dichloropropane; 3-Hydroxycarbofuran; Aldicarb; Aldicarb Sufone; Aldicarb Sulfoxide; Bromobenzene; Bromodichloromethane; Bromomethane; Butachlor; Carbaryl; Chloroethane; Chloromethane; Dibromochloromethane; Dibromomethane; Dicamba; M-Dichlorobenzene; Methomyl; Metola-chlor (Dual); Metribuzen; Propoachlor

#### ***State Regulated Contaminants***

Aldrin, DDT, Dieldrin, Zinc

#### ***Secondary Contaminants***

Aluminum, Silver

#### ***Additional Contaminants***

Acetochlor; Acifluorfen; Chlorotoluenes (Total); Cis-1,3-Dichloropropene; Cobalt; Cyanazine; Dacthal (DCPA); Methyl Tert-Butyl Ether (MTBE); Molybdenum; Nickel; Trans-1,3-Dichloropropene; Treflan (Trifluralin); Vanadium; Monochloroacetic Acid (HAA); Monobromoacetic Acid (HAA), Dichloroacetic Acid (HAA); Trichloroacetic Acid (HAA); Dibromoacetic Acid (HAA)