



**2021 Drinking Water Quality Report** 

**Summarizing 2020 Water Quality Test Results** 



# **2021 WATER QUALITY REPORT**

## North Park Public Water District

## Annual Drinking Water Quality Report IL 2015500

Annual Water Quality Report for the period of January 1 to December 31, 2020

The North Park Public Water District (NPPWD) is a public corporation chartered May 9, 1955. The District currently provides an average of 3.5 million gallons of water per day serving a population of approximately 35,252 in the Machesney Park, Roscoe, and Loves Park area.

High professional standards have maintained the District's reliability for the past 65 years in the service area. The District has received certificates of commendation for its technical operation from both the Illinois Environmental Protection Agency and the Illinois Department of Public Health. The District has received international recognition through the Ground Water Guardian Foundation for its groundwater protection efforts. The District is committed to providing safe drinking water to its customers.

### **Annual Drinking Water Quality**

This report is intended to provide you with important information about your drinking water and the efforts made by the NORTH PARK PWD water system to provide safe drinking water.

The source of drinking water used by NORTH PARK PWD is Groundwater.

This report is published in entirety at:

http://ccr.northparkwater.org/

waterqualityreport.pdf
For more information regarding this



#### Kelly Saunders, (815) 633-5461

report, contact:

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

### **Source of Drinking Water**

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 naturallyoccurring 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 EPAs 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 Safe Drinking Water Hotline (800) 426-4791.

#### Source Water Assessment

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by the District Office or call our water operator at (815) 633-5461. 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://dataservices.epa.illinois.gov/swap/factsheet.aspx

To determine North Park Public Water District's susceptibility to groundwater contamination, a Well Site Survey, published in 1989 by the Illinois EPA, and a Wellhead Protection Management Plan were reviewed. Based on the information obtained in these documents, several potential sources of contamination are present that could pose a hazard to groundwater utilized by the North Park Public Water District community water supply wells.

The community's source water is susceptible to VOC contamination although tested levels have historically been less than half the MCL established for each contaminant. NPPWD's source water is not susceptible to SOC contamination. This determination is based on the location of potential sources of contamination and the land use within the recharge areas of the wells (see the Potential Sources of Contamination section in the Source Water Assessment Program Fact Sheet). However, as a result of monitoring conducted at the wells and entry point to the distribution system, the land use activities, and source water protection initiatives by the NPPWD, the NPPWD's source water is not susceptible to IOC contamination.

Furthermore, in anticipation of the US EPA's proposed Ground Water Rule, the Illinois EPA has determined that NPPWD's community water supply wells are not susceptible to viral contamination. This determination is based upon the completed evaluation of the following criteria used in the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper site conditions; 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. Having stated this, the "[US] EPA is proposing to require States to identify systems in karst, gravel, and fractured rock aquifer systems as sensitive and these systems must perform routine source water monitoring."

Because a portion of the community's wells are open to an unconfined sand and gravel aquifer, the Illinois EPA evaluated the well hydraulics associated with NPPWD's well field. Well #2 has approximately 140 feet of overburden; Wells #3, #4, and #5 have approximately 80 feet of overburden. Well #2 is about 190 feet deep with the last 50 feet open to the aquifer. Wells #3, #4, and #5 are approximately 240 feet deep with the last 160 feet open to the aquifer. This should provide an adequate degree of filtration to prevent the movement of pathogens into the wells. The Illinois Environmental Protection Act provides minimum protection zones of 200 and 400 feet for North Park Public Water District's wells. These minimum protection zones are regulated by the Illinois EPA to further reduce the risk to the source water, NPPWD has

implemented a wellhead protection management plan that includes source water protection management strategies and contingency planning. This effort resulted in a reduced risk of SOC and VOC contamination to the community water supply. Hence, the community water supply received a special exception permit from the Illinois EPA which allows a reduction in SOC and VOC monitoring. The outcome of this monitoring reduction has saved the District considerable laboratory analysis costs.

As authorized by the Illinois Environmental Protection Act, NPPWD enacted a "maximum setback zone" ordinance for Wells #2, #3, #4, and #5, that allows county and municipal officials the opportunity to provide additional potential source prohibitions up to 1,000 feet from their wells. NPPWD also developed a recharge area management program in order to further protect the community's source water from potential contamination sources for which it is susceptible. The management program covers the recharge areas for NPPWD Wells #2, #3, #4, and #5.

To further minimize the risk to NPPWD's groundwater supply, the Illinois EPA recommends that NPPWD continue to evaluate additional source water protection management options to address the land use activities within the community wells' recharge areas. Specifically, these management options should include potential effects from non print sources related to agricultural land uses. If these additional source water protection management options are not addressed, NPPWD may risk revocation of their Safe Drinking Water Act Monitoring Waiver for SOCs and VOCs.

**Community Safety Note:** The NPPWD has eliminated the use of chlorine gas as a disinfectant. Liquid sodium hypochlorite is now the disinfectant being utilized at all District wells which eliminates the possibility for accidental release of gaseous chlorine to surrounding neighborhoods.

Additional information pertaining to public participation regarding decisions that may affect the quality of water may be obtained by calling the North Park Public Water District at (815) 633-5461 or by attending regularly scheduled board meetings. Meetings are conducted at the District Office, 1350 Turret Drive, Machesney Park, Illinois. You may call the District Office for the time and date of the next meeting.

#### **IMPORTANT NOTICE**

If you notice any suspicious activities at or near any of the North Park Water facilities, please call the District office at (815) 633-5461

IT IS A FEDERAL OFFENSE TO TAMPER WITH ANY NPPWD FACILITY (US CODE TITLE 42, SECTION 300i-1)



North Park Public Water District 1350 Turret Drive Machesney Park, IL 61115 (815) 633-5461 www.northparkwater.org

#### **Regulated Contaminants Detected in 2020**

Collected in 2020 Unless Noted

No drinking water quality violations were recorded in 2020.

#### **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 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 disinfection 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.

**ppm:** milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

ppt: nanograms per liter, or parts per trillion.

**Treatment Technique or TT:** A required process intended to reduce the level of a contaminant in drinking water.

pCi/L: picoCuries per liter (measuring radioactivity).

#### **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. ALG's 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	# of Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2020	1.3	1.3	0.29	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2020	0	15	3.1	0	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.

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 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.

Disinfectants and Disinfection By-Products											
	Collection Highest Level Date Detected		Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination			
Chlorine	12/31/2020	1	1-1	MRDLG = 4	MRDL = 4	ppm	No	Water additive used to control microbes.			
Haloacetic Acids (HAA5)1	2020	6	5.03 - 6.16	No goal for the total	60	ppb	No	By-product of drinking water disinfection.			
Total Trihalomethanes (TTHM)1	2020	16	15.37 - 15.9	No goal for the total	80	ppb	No	By-product of drinking water disinfection.			

<sup>1</sup> Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

## Regulated Contaminants Detected in 2020 (continued) Collected in 2020 Unless Noted

	Collection Date	Highest Levels Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	05/07/2018	1.6	0 - 1.6	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronic production wastes.
Barium 05/07/201		0.16	0.065 - 0.16	2	2	ppm	No	Discharge of drilling wastes; Discharge fi metal refineries; Erosion of natural depos
Chromium	05/07/2018	6.7	0 - 6.7	100	100	ppb	No	Discharge from steel and pulp mills; Eros of natural deposits.
Fluoride	05/07/2018	0.938	0.699 - 0.938	4	4.0	ppm	No	Erosion of natural deposits; Water additi which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as nitrogen) <sup>2</sup>	2020	4	1.5 - 3.9	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits.
Selenium	05/07/2018	4	0 - 4	50	50	ppb	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Sodium <sup>3</sup>	05/07/2018	68	23 - 68			ppm	No	Erosion from naturally occurring deposits Used in water softener regeneration.

quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

<sup>3</sup> 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 you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

Radioactive Contaminants									
	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination	
Combined Radium 226/228	2020	2.5	0.859 - 2.5	0	5	pCi/L	No	Erosion of natural deposits.	
State Regulated Contamina	nts								
	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL Units		Violation	Likely Source of Contamination	
Iron	05/07/2018	0.092	0 - 0.092		1.0	ppm	No	Erosion of natural deposits.	
Manganese	05/07/2018	2.8	0 - 2.8	150	150	ppb	No	Erosion of natural deposits.	
Zinc	05/07/2018	0.017	0 - 0.017	5	5	ppm	No	Naturally occurring; Discharge from metal factories.	
Volatile Organic Contaminants (VOCs)									
	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination	
Tetrachloroethylene	2020	2	0 - 2.5	0	5	ppb	No	Discharge from factories and dry cleaners.	
Trichloroethylene	2020	2	0 - 2.1	0	0 5		No	Discharge from metal degreasing sites and other factories.	
Coliform Bacteria			·						

Note: The state requires monitoring of certain contaminant less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old.

Fecal Coliform or E. Coli Maximum Contaminant

Level

**Total** 

Maximum

**Contaminant Level** 

5% of all samples

**Contaminant** 

Level

0

Maximum

**Contaminant Level** 

Goal

0

Our water system was required to monitor for the contaminants required under the Unregulated Contaminant Monitoring Schedule (UCMR). Results may be obtained by calling the contact listed on the first page of this report.

Total No. of Positive E.

Coli Fecal Coliform

**Samples** 

**Violation** 

No

**Likely Source of** Contamination

Naturally present in the environment.

#### **PFAS Statewide Investigation**

Per- and Polyfluoroalkyl Substances (PFAS) are contaminants you are now seeing in your Consumer Confidence Report (CCR) for the first time. The Illinois Environmental Protection Agency (Illinois EPA) recently tested our water system for compounds known as Per- and Polyfluoroalkyl Substances (PFAS) as part of a statewide investigation of community water supplies.

Recent developments in analytical technology for PFAS compounds have enabled laboratories to test for PFAS compounds at the part per trillion (ppt) range versus the previous level in parts per billion (ppb). This represents an order of magnitude improvement in analytical capability that have identified compounds in the water that previously would have been undetected.

As of January 2021, neither the Illinois EPA nor the U.S. EPA have yet developed enforceable drinking water standards for PFAS. However, in the interim, Illinois EPA has developed health-based screening levels for the small number of PFAS for which there is appropriate information to do so. Screening levels are intended to be protective of all people consuming the water over a lifetime of exposure. As purveyors of one of the worlds most vital resources, water, North Park Public Water District is participating in continued communication with the IEPA and other utilities around the country to facilitate and identify research on this needed subject. The quality of the water we send to our customers is, and will continue to be, of the utmost importance to us at NPPWD.

In 2020, North Park Public Water District was sampled as part of this statewide investigation. Results from this sampling indicated four PFAS contaminants were detected in our drinking water with one being above the health advisory level established by Illinois EPA (see results on page 7).

Additional monitoring is being conducted on an ongoing basis. For more information about PFAS health advisories visit https://www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx

#### What Are PFAS?

Per- and poly-fluoroalkyl substances are a group of thousands of chemicals collectively known as PFAS. Since the 1940s, PFAS have been used in manufacturing, firefighting, water- and oil-resistant products, and many consumer products such as carpet, clothing, cosmetics, and food packaging. Two of the most common compounds within this class, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), stopped being produced in the United States (U.S.) in the early 2000s, but these compounds may still be present in imported goods.

PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body – meaning they do not break down and they can accumulate over time.

#### Why are PFAS Important?

PFAS are present in many consumer goods, including food packaging and personal care products, and scientists have found levels of PFAS in the blood of nearly all individuals tested. Exposure to high levels of PFAS over time may cause adverse health effects. Exposure to PFAS above the screening levels does not mean that a person will get sick or that an adverse health effect will occur, since screening levels are conservative estimates. The possible health effects of PFAS are dependent on how much a person is exposed to and how long they are exposed to it. Exposure to PFAS above recommended screening levels for periods of time may mean that a person is at a greater risk of experiencing these adverse effects.

Scientific studies of laboratory animals, as well as studies on human populations exposed to PFOA and PFOS over periods of time, have shown that exposure to PFOA and PFOS above certain levels may result in adverse effects such as:

· increased cholesterol levels

• increased risk of high blood pressure or pre-eclampsia in pregnant women

· changes in liver enzymes

- · small decreases in infant birth weight
- decreased response to vaccines in children
- · increased risk of kidney or testicular cancer

#### Where Can PFAS Be Found?

#### PFAS can be found in:

- Food packaged in PFAS-containing materials, processed with equipment that used PFAS, or grown in PFAS-contaminated soil or water.
- Commercial household products, including stain- and water-repellent fabrics, nonstick products (e.g., Teflon), polishes, waxes, paints, cleaning products, and fire-fighting foams (a major source of groundwater contamination at airports and military bases where firefighting training occurs).
- Workplace, including production facilities or industries (e.g., chrome plating, electronics manufacturing, or oil recovery) that use PFAS.
- Drinking water, typically localized, and associated with a specific facility (e.g., manufacturer, landfill, wastewater treatment plant, firefighter training facility).
- · Living organisms, including fish, animals, and humans, where PFAS have the ability to build up and persist over time.

Certain PFAS chemicals are no longer manufactured in the United States as a result of phase outs including the PFOA Stewardship Program in which eight major chemical manufacturers agreed to eliminate the use of PFOA and PFOA-related chemicals in their products and as emissions from their facilities. Although PFOA and PFOS are no longer manufactured in the United States, they are still produced internationally and can be imported into the United States in consumer goods such as carpet, leather and apparel, textiles, paper and packaging, coatings, rubber and plastics.

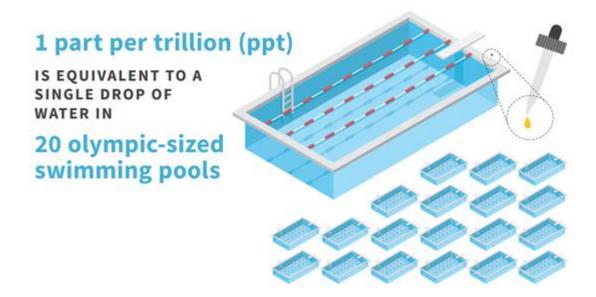
#### What is North Park Public Water District Doing About PFAS?

North Park Public Water District has taken measures to respond to the results of this testing. As proactive measures to protect our drinking water supply, North Park Public Water is working to:

- Monitor PFAS levels through quarterly sampling beginning in January 2021
- Evaluating treatment options and developing a plan to reduce PFAS in potable water
- · Implementing treatment options if required

PFAS Analyte <sup>4</sup>								
	Acronym	Health- Based Guidance Level	Analytical Result at TP03	Analytical Result at TP04	Analytical Result at TP02	Analytical Result at TP01 <sup>5</sup>	Units	Violation
Perfluorobutanesulfonic acid	PFBS	2,100	2.7 - 3.4	2.7 - 3.5	3.5 - 3.7	2.8 - 3.6	ppt	No
Perflurohexanesulfonic acid	PFHxs	140	2.7	5.1 - 5.3	12.0 - 13.0	3.2 - 5.5	ppt	No
Perfluorooctanesulfonic acid	PFOS	14	5.0 - 4.1	4.2 - 5.0	2.6 - 2.8	4.1 - 5.4	ppt	No
Perfluorooctanoic acid	PFOA	2	2.3 - 3.0	2.7 - 3.1	3.0 - 3.4	2.4 - 3.0	ppt	No
Perfluorohexanoic acid	PFHxA	560,000	0	0	2.2 - 3.1	0	ppt	No

<sup>4</sup> Only analytes with detections have been included for this table. For a full list of all analytes sampled, please visit: https://www.northparkwater.org/pfas-information/



<sup>5</sup> TP01 was taken out of service in May 2021. Prior to that, TP01 has not been used as a primary production well since 2013.

# **3rd Annual Art Contest**

Each year, North Park Public Water District partners with the Harlem School District and the Kinnikinnick School District for an Art Contest. The contest provides a beautiful cover for our annual Water Quality Report, and it also shows off the incredibly talented 3rd, 4th, and 5th graders in our area! This year's Art Contest Theme was "What Does Water Mean to You?" As usual, we had some wonderful art to choose from this year! We would like to thank everyone that participated in the 2021 Art Contest. Thank you for sharing your talents

with us.

WATER MEANS
THE WORLD TO
ME I

ART CONTEST WINNER
Elliotte M.
Ralston Elementary



Bao N.

Maple Elementary



Emma H.
Stone Creek Elementary



Khallie H.
Olson Park Elementary



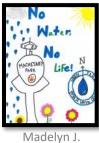
Aidan B.
Olson Park Elementary



Alison G.
Stone Creek Elementary



Brayden B.
Stone Creek Elementary



Ralston Elementary



Stone Creek Elementary



Carter C.
Olson Park Elementary



Annabelle H.

Maple Elementary



Ralston Elementary



Stone Creek Elementary



Stone Creek Elementary



Sophia S.
Olson Park Elementary



Olson Park Elementary



Makenna T.
Stone Creek Elementary



Maddisyn L.
Olson Park Elementary



Leah H.
Stone Creek Elementary



Jazlyn S.

Maple Elementary



Marissa W.
Olson Park Elementary