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Public Works**
7607 W. College Drive
Palos Heights, IL 60463

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Phone: (708) 361-1806
Fax: (708) 361-8430

PALOS HEIGHTS PUBLIC WORKS DEPARTMENT
7607 West College Drive, Palos Heights, Illinois 60463

ANNUAL DRINKING WATER QUALITY REPORT
CITY OF PALOS HEIGHTS, ILLINOIS

**POSTAL PATRON - LOCAL
PALOS HEIGHTS, ILLINOIS 60463**

DATED MATERIAL

PUBLIC WORKS BULLETIN BOARD

From The City of Palos Heights Public Works Department

Subject Ordinance Code 50.28 Water Sprinkling

The City of Palos Heights is requesting your cooperation on the subject ordinance. During the months of May, June, July, August and September, water may only be used for sprinkling gardens or lawns between the hours of 7:00 am and 10:00 am or between the hours of 7:00 pm and 10:00 pm on even- numbered days of the calendar month on premises bearing even numbered street numbers, and odd- numbered days of the calendar month on premises bearing odd- numbered street numbers.

Cross Connection Control Ordinance 150.671

A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. The Illinois Environmental Protection Agency (IEPA) requires that all water systems in the State of Illinois have an effective Cross Connection Control Program. We are responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow condition, enter the distribution system. In order to provide the best program possible, the City of Palos Heights has contracted with Backflow Solutions, Inc to survey and compile residential and commercial water customer data and determine if cross connections exist. By working together and cooperating in this critical program, we can further protect our water from potential contamination.

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and 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. Our water source is surface water drawn from Lake Michigan and treated by the City of Chicago. We are committed to ensuring the quality of your water and are pleased to report that our drinking water is safe and meets **all** state and federal requirements.

If you have any questions about this report or concerning your water utility, please contact Adam Jasinski at the Palos Heights Public Works Department at (708) 361-1806. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Water and Sewer Committee meetings. They are held the 4th Tuesday of each month at 6:30 p.m. at City Hall.

The Palos Heights Public Works Department routinely monitors for constituents in your drinking water according to Federal and State laws. The enclosed tables show the results of our monitoring for the period of January 1st to December 31st, 2021. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

Enclosed are the water quality tables from the City of Chicago, our source supply, and samples collected by the City of Palos Heights.

In these tables you will find many terms and abbreviations that may not be familiar to you. To help you better understand these terms, we provided definitions to better explain the constituents.

2021 Water Quality Data

-Definition of Terms-

Maximum Contaminant Level Goal (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 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.

Highest Level Detected: This column represents the highest single sample reading of a contaminant of all samples collected in 2021, except where a specific date is indicated.

Range of Detections: This column represents a range of individual sample results, from lowest to highest that were collected during the CCR calendar year.

Date of Sample: If a date appears in this column, the Illinois EPA requires monitoring for this contaminant less than once per year because the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the Consumer Confidence Report calendar year.

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

ND: Not detectable at testing limits.

N/A: Not applicable

2021 Regulated Contaminants Detected

Lead and Copper

Date Sampled: 8/25/2020

Definitions:

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

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.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2020	1.3	1.3	0.166	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

Water Quality Test Results

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

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.

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

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

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

na: not applicable.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

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.

Violations Table

Lead and Copper Rule

The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.

Violation Type	Violation Begin	Violation End	Violation Explanation
LEAD CONSUMER NOTICE (LCR)	12/30/2020	1/19/2021	City failed to provide the results of the lead tap water monitoring samples to consumers at the location where water was tested within 30 days of receiving the findings. The results from the lead tap water samples were negative or below the EPA action levels; however, the City is required to report the results with 30 days after learning the findings. Results were shared with the consumers after the 30 day period.

Regulated Contaminants

Disinfectants and Disinfections by-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2021	1	0.99 - 1.2	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2021	25	14 - 32.7	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TThm)	2021	45	19.62 - 82	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

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.

2021 Source Water Assessment Summary

The Illinois EPA implemented a Source Water Assessment Program (SWAP) to assist with watershed protection of public drinking water supplies.

The SWAP inventories potential sources of contamination and determined the susceptibility of the source water to contamination. The Illinois EPA has completed the Source Water Assessment Program for our supply.

Further information on our community water supply's Source Water Assessment Program is available by calling DWM at 312-742-2406 or by going online at <http://dataservices.epa.illinois.gov/swap/factsheet.aspx>

Maximum Contamination Levels (MCL) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 3 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (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 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>.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that 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.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thanks for your understanding.

We at the City of Palos Heights Public Works Department work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.



MEMBER
ILLINOIS MUNICIPAL LEAGUE

CITY OF PALOS HEIGHTS
7607 W. COLLEGE DRIVE
PALOS HEIGHTS, ILLINOIS 60463-1074

PHONE (708) 361-1800
FAX (708) 361-9711

EDUCATIONAL STATEMENTS REGARDING COMMONLY FOUND DRINKING WATER CONTAMINANTS FOR THE 2021 CONSUMER CONFIDENCE REPORT

“All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or is man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials,” All 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 Environmental Protection Agency’s Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap 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 radioactive materials, and pick up substances resulting from the presence of animals or human activity.

Possible contaminants consist of:

- 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 may 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 may also come from gas stations, urban storm water runoff and septic systems; and
- Radioactive contaminants, which may be naturally occurring or be the result of oil and gas production and mining activities.

Our community water supply purchases water from another water supply. The following information relates to that supply’s source water.

The Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems. The very nature of surface water allows contaminants to migrate into the intake with no protection only dilution. This is the reason for mandatory treatment for all surface water supplies in Illinois. Chicago’s offshore intakes are located at a distance that shoreline impacts are not usually considered a factor on water quality. At certain times of the year, however, the potential for contamination exists due to wet-weather flows and river reversals. In addition, the placement of the crib structures may serve to attract waterfowl, gulls and terns that frequent the Great Lakes area, thereby concentrating fecal deposits at the intake and thus compromising the source water quality. Conversely, the shore intakes are highly susceptible to storm water runoff, marinas and shoreline point sources due to the influx of groundwater to the lake. Throughout history there have been extraordinary steps taken to assure a safe source of drinking water in the Chicagoland area. From the building of offshore cribs and the introduction of interceptor sewers to the lock-and-dam system of Chicago’s waterways and the city’s Lakefront Zoning Ordinance. The city now looks to the recently created Department of the Water Management, Department of Environment and the MWRDGC to assure the safety of the city’s water supply. Also, water supply officials from Chicago are active members of the West Shore Water Producers Association. Coordination of water quality situations (i.e., spills, tanker leaks, exotic species, etc.) and general lake conditions are frequently discussed during the association’s quarterly meetings. Also, Lake Michigan has a variety of organizations and associations that are currently working to either maintain or improve water quality.

Finally, one of the best ways to ensure a safe source of drinking water is to develop a program designed to protect the source water against potential contamination on the local level. Since the predominant land use within Illinois’ boundary of Lake Michigan watershed is urban, a majority of the watershed protection activities in this document are aimed at this purpose. Citizens should be aware that everyday activities in an urban setting might have a negative impact on their source water. Efforts should be made to improve awareness of storm water drains and their direct link to the lake within the identified local source water area. A proven best management practice (BMP) for this purpose has been the identification and stenciling of storm water drains within a watershed. Stenciling along with an educational component is necessary to keep the lake a safe and reliable source of drinking water.

2021 Voluntary Monitoring

The City of Chicago has continued monitoring for Cryptosporidium, Giardia and E. Coli on its source water as part of its water quality program. No Cryptosporidium or Giardia was detected in source water samples collected in 2021. Treatment processes have been optimized to provide effective barriers for removal of Cryptosporidium Oocysts and Giardia cysts in the source water, effectively removing these organisms in the treatment process. By maintaining low turbidity through the removal of particles from the water, the possibility of Cryptosporidium and Giardia organisms getting into the drinking water system is greatly reduced. In 2021, CDWM has also continued monitoring for hexavalent chromium, also known as chromium-6. USEPA has not yet established a standard for chromium-6, a contaminant of concern which has both natural and industrial sources. Please address any questions or concerns to DWM’s Water Quality Division at 312-744-8190. Data reports on the monitoring program for chromium-6 are posted on the City’s website which can be accessed at the following address below:
http://www.cityofchicago.org/city/en/depts/water/supp_info/water_quality_resultsandreports/city_of_emerigincontaminantstudy.html

Thinking Green and Water Conservation

Think about water. It’s yours for the asking. All you have to do is turn on a faucet. But, now think again. The water we use doesn’t come from nowhere. It is carefully processed – clean, safe, and piped directly into your home – a valuable resource that shouldn’t be wasted.

7 ways to conserve and think green...

1. When washing dishes by hand, don’t let the water run while rinsing. Fill one sink with wash water and the other with rinse water.
2. Adjust sprinklers so only your lawn is watered and not your house, sidewalks or driveway and sprinkle in the morning or evening when temperatures are cooler for less evaporate.
3. Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
4. Shorten your shower by a minute or two and you’ll save up to 150 gallons per month.
5. Upgrade older toilets and fixtures to newer more efficient models.
6. Use a water-efficient showerhead. They’re inexpensive, easy to install, and can save you up to 750 gallons a month.
7. Turn off water while brushing your teeth, and can save you up to 45 gallons a month.



Water conservation is a good way of life. Remember where it comes from and where it goes. It isn’t hard to conserve water; it doesn’t change our lives drastically. Think about water – and when you do – think about conserving it.

2021 Water Quality Data

-Definition of Terms-

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ND: Not detectable at testing limits.

N/A: Not applicable

Detected Contaminants

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
<u>Turbidity Data</u>						
TURBIDITY (NTU Lowest Monthly %≤0.3 NTU) Soil runoff.	N/A	TT(Limit: 95% ≤0.3 NTU)	Lowest Monthly % 100.0%	100.0% - 100.0%		
TURBIDITY (NTU/Highest Single Measurement) Soil runoff.	N/A	TT(Limit 1 NTU)	0.20	N/A		
<u>Inorganic Contaminants</u>						
BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	2	2	0.0203	0.0200 - 0.0203		
NITRATE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.28	0.28 - 0.28		
TOTAL NITRATE & NITRITE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.28	0.28 - 0.28		
<u>Total Organic Carbon</u>						
TOC [TOTAL ORGANIC CARBON] The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA						

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
<u>Unregulated Contaminants</u>						
SULFATE (ppm) Erosion of naturally occurring deposits.	N/A	N/A	27.4	26.9 - 27.4		
SODIUM (ppm) Erosion of naturally occurring deposits; Used as water softener.	N/A	N/A	9.99	9.79 - 9.99		
<u>State Regulated Contaminants</u>						
FLUORIDE (ppm) Water additive which promotes strong teeth.	4	4	0.77	0.65 - 0.77		
<u>Radioactive Contaminants</u>						
COMBINED RADIUM (226/228) (pCi/L) Decay of natural and man-made deposits.	0	5	0.95	0.83 - 0.95		2/4/2020
GROSS ALPHA excluding radon and uranium (pCi/L) Decay of natural and man-made deposits.	0	15	3.1	2.8 - 3.1		2/4/2020

-Unit of Measurement-

ppm - Parts per million, or milligrams per liter

ppb - Parts per billion, or micrograms per liter

NTU - Nephelometric Turbidity Unit, used to measure cloudiness in drinking water

%<0.3 NTU - Percent samples less than 0.3 NTU

pCi/L - Picocuries per liter, used to measure radioactivity

ND - Analyte not detected at or above the reporting limit

Water Quality Data Table Footnotes

TURBIDITY

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

UNREGULATED CONTAMINANTS

A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this contaminant is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

FLUORIDE

Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride level of 0.7 mg/l with a range of 0.6 mg/l to 0.8 mg/l.

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