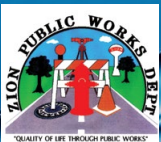


ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By
City of Zion

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

PWS ID#: 097-2000

We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit <https://bit.ly/3IeRyXy>.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

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 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

“
When the well is dry, we
know the worth of water.
—Benjamin Franklin
”

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 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>.



QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Victor Ransom, Superintendent of Operations, at (847) 746-4054.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.watercalculator.org.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the first and third Tuesday of each month at 7:00 p.m. at City Hall, 2828 Sheridan Road, Zion.

Where Does My Water Come From?

The City of Zion's customers are fortunate because we enjoy an abundant water supply from Lake Michigan. The City of Zion purchases all of its water from Lake County Public Water District (LCPWD). For information about water treatment, please contact Donald White at (847) 746-2052.

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, which 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.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those 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. We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

The state recommends monitoring for certain substances less 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.

The percentage of total organic carbon (TOC) removal was measured each month, and the system met all TOC removal requirements set by Illinois EPA.



REGULATED SUBSTANCES									
				City of Zion		Lake County Public Water District (LCPWD)			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2021	10	0	NA	NA	<1	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2021	2	2	NA	NA	0.020	0.020–0.020	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2021	[4]	[4]	1.2	1–1.36	NA	NA	No	Water additive used to control microbes
Di(2-ethylhexyl) Phthalate (ppb)	2021	6	0	NA	NA	<1.8	NA	No	Discharge from rubber and chemical factories
Fluoride (ppm)	2021	NA	NA	NA	NA	0.757	0.546–0.757	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2021	60	NA	25	8.6–30.4	5.94	5.94–5.94	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	NA	NA	0.31	0.31–0.31	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2021	50	50	NA	NA	2	2–2	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sodium (ppm)	2021	NA ¹	NA	NA	NA	11	11–11	No	Erosion of naturally occurring deposits; used in water softener regeneration
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2021	80	NA	60	13.6–67.5	21	21–21	No	By-product of drinking water disinfection
Turbidity ² (NTU)	2021	TT	NA	NA	NA	0.5	0.3–0.5	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2021	TT = 95% of samples meet the limit	NA	NA	NA	99.96	NA	No	Soil runoff
Zinc (ppb)	2021	5,000	NA	NA	NA	<0.006	NA	No	Naturally occurring; discharge from metal factories

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)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.182	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES³

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	City of Zion		Lake County Public Water District (LCPWD)		UCMR4		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Perfluorooctanesulfonate Acid [PFOS] (ppt)	2021	NA	NA	2.2	2–2.2	NA	NA	Unknown sources in Lake Michigan
Perfluorooctanoic Acid [PFOA] (ppt)	2021	NA	NA	2.2	<2–2.2	NA	NA	NA

¹ Sodium is not currently regulated by the U.S. EPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1,000 or more.
² Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.
³ No MCL or mandatory health effects language has been established for this contaminant by either state or federal regulations. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

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 triggers treatment or other required actions by the water supply.

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.

MFL (million fibers per liter): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

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

