CARMEL CLAY CITIZENS WATER

2022 WATER QUALITY REPORT

City of Carmel Utilities

We are pleased to report that your tap water met all Environmental Protection Agency (EPA) and state standards in 2022.

Water Contaminants Before Treatment

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 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 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, storm water runoff, and residential uses.
- Organic chemicals, 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 materials, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Water Purity

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances.

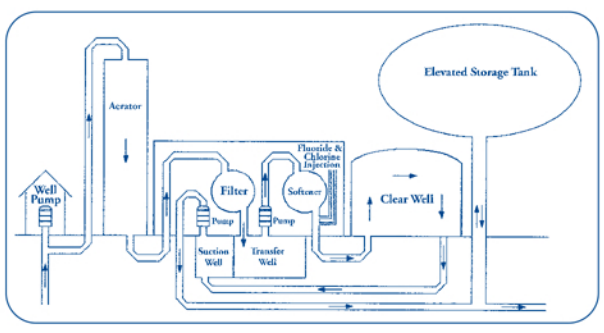
All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800-426-4791).

Compromised Immune Systems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as those 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/Center for Disease Control (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).



Our 3-Step Water Treatment Process

1) Iron Removal

The water treatment plant aerates the water to oxidize the soluble iron found naturally in well water. The oxidized iron adheres to itself forming clumps that are filtered out of the water by iron filters.

2) Water Softened

Then, the iron filtered water passes through a process where the water is softened to eight grains hardness, which is considered moderately hard water. Should you desire water that has been softened to zero (0) grains hardness, a home softener will be needed. During periods of extremely high summer water usage, the level of softening may be decreased to meet customer demand.

3) Chlorine and Fluoride Added

Chlorine is added to destroy any harmful bacteria present and to maintain a level of protection as the water travels through the distribution system. Fluoride is added to help strengthen resistance to cavities in teeth. Following the injection of chlorine and fluoride, the water enters the distribution system to be delivered to Carmel's homes and businesses.

City of Carmel Utilities

CITY OF CARMEL
Jim Brainard, Mayor
One Civic Square, Carmel, IN 46032
PWSID# 5229024

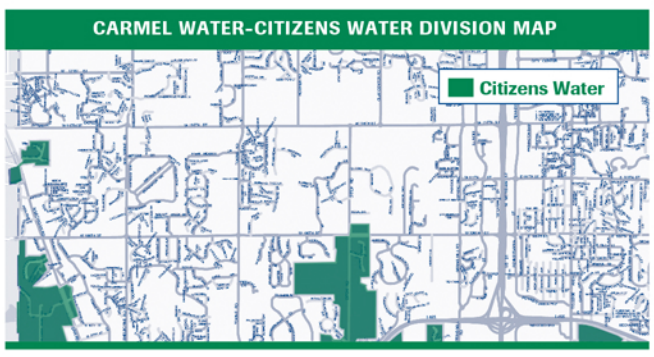
Questions?

If you have any questions about this report or concerning your water utility, please contact Carmel Utilities at 317-571-2443 or go to the Utilities page on the City of Carmel website at www.carmel.in.gov

For maintenance concerns or questions about hydrants, taps or mains, call the water utilities' operations facility at 317-733-2855 or email Utlcustomerservice@carmel.in.gov

EPA WaterSense PARTNER

EPA's Safe Drinking Water (800) 426-4791
www.EPA.gov



Source of Carmel Clay's water supply that comes from Citizens Water

White River supplies two of the four surface water treatment plants: White River and White River North. Morse Reservoir, near Noblesville, stores water to assure a dependable supply in the White River to these plants. Fall Creek is another surface water supply. Geist Reservoir stores water to assure an adequate supply in Fall Creek for the Fall Creek Treatment Plant.

A number of wells are used intermittently to supplement the supplies to the White River, White River North, and Fall Creek plants. Citizens Water also receives some surface water from Eagle Creek Reservoir which supplies water to the T.W. Moses plant.

Currently, Citizens Water has five groundwater stations that serve smaller portions of its service area. These are White River North, Geist Station, Harding Station, South Well Field, and Ford Road Plant. These groundwater stations treat water pumped from underground water sources called aquifers.

We are pleased to report that your tap water met all Environmental Protection Agency (EPA) and state standards.

Carmel Utilities routinely monitors for constituents 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, 2022. As water travels over the land or underground, it can pick up substances or contaminants. The chart below gives quick look at some of the substances that the EPA requires the utility to test for. The contaminant is listed to the left, followed by the maximum amount allowed by regulations and then the amount that we found in our water. The tests are performed on treated or "finished" water (excluding the last three listed in this chart). See the definitions at the bottom of the chart.

Carmel Clay – Citizens Water 2022 – Water Quality Results

REGULATED SUBSTANCES **PWSID# 5229024**

Consumer Confidence Report Data 2022

SUBSTANCES (UNIT OF MEASURE)	MCL (MRDL)	MCLG [MRDLG]	SYSTEM WIDE [AVG]	SYSTEM WIDE [MAX]	RANGE LOW-HIGH	VIOLATIONS	TYPICAL SOURCE
Atrazine (ppb)	3	3 (RAA)	BDL	0.89 (RAA)	ND -0.89	NO	Herbicide Runoff
Barium (ppm)	2	2	0.13	0.25	0.040 -0.25	NO	Natural Deposits
Chloramines (ppm) measured as Total Chlorine	4	4	2	3	0.12-3.0	NO	Water Additive Used to Control Microbes
Combined Radium (pCi/L) (2022 data)	5	0	N/A	0.8	ND-0.80	NO	Erosion of Natural Deposit
Fluoride (ppm)	4	4	0.71	0.98	0.12-0.98	NO	Natural Deposits and Treatment Additive
Gross Alpha, Excl. Radon & Uranium (pCi/L) (2022 data)	15	0	N/A	2	ND-2.0	NO	Erosion of Natural Deposit
Haloacetic Acid [HAA] (ppb)	60	N/A	38 (LRAA)	29.8	16.7-29.8	NO	By-Product of Chlorination Treatment
Nitrate (ppm)	10	10	0.69	1.6	ND-1.6	NO	Fertilizers, Septic Tank Leachate
Simazine (ppb)	4	4	BDL	0.81	ND-0.81	NO	Herbicide Runoff
TTHMs [Total Trihalomethanes] (ppb)	80	N/A	52.1 (LRAA)	59.4	27.7-59.4	NO	By-Product of Chlorination Treatment
Total Coliform Bacteria (% positive samples)	5%	N/A	0.15%	0.63%	0 -0.63%	NO	Naturally Present in the Environment
Turbidity (NTU)	100% < 1 95% < 0.3		0.032	0.18	0.020-0.18	NO	Soil Runoff
Xylenes (ppm)	10	10	BDL	0.000291	ND-0.000291	NO	Discharge from petroleum/chemical factories
1,2,4-Trichlorobenzene (ppb)	70	70	BDL	0.14	ND-0.14	NO	Discharge from petroleum/chemical factories

Tap water samples were collected for lead and copper analyses from samples sites throughout the community

	AL	MCLG	CARMEL CLAY – CITIZENS WATER UTILITY #site over AL	90th percentile (2022 data)	VIOLATIONS	TYPICAL SOURCE
Copper (ppm)	1.3	1.3 (90th percentile)	0 of 10>AL	0.293	NO	Corrosion of Customers Plumbing
Lead (ppb)	15	0 (90th percentile)	0 of 10 > AL	1.9	NO	Corrosion of Customers Plumbing

Lead in Water Carmel Utilities regularly tests drinking water for lead and takes steps in its treatment process to ensure corrosive elements do not result in elevated levels of lead in customer tap water. Lead exposure comes primarily from water service lines which extend from the water main to the home and/or from interior plumbing components. Homes built before 1950 are more likely to have lead pipes. Homes built before 1986 may have lead soldering. Carmel Utilities lead testing comes exclusively from homes most likely to have lead in its plumbing system. If you would like to determine if your home has lead in its plumbing components or service line, hire a licensed plumber who can best advise you.

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. Carmel Utilities 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 or at www.epa.gov/safewater/lead.

SECONDARY SUBSTANCES	SMCL	MCGL					
			*Secondary standard are non-mandatory guidelines established by the EPA to assist utilities in managing drinking water for aesthetic considerations, such as taste, odor, and color. These contaminants are not considered to present a risk to human health at the Secondary Maximum Contaminant Level (SMCL).				
Chloride (ppm)	250		72	180	21-180	NO	Natural Deposits and Treatment Additive
Hardness (grains/gal)	NA		18	28	9-28	NO	Erosion of Natural Deposit; Leaching
Iron (ppm)	0.3		0.013	0.12	ND-0.12	NO	Erosion of Natural Deposit; Leaching
Manganese (ppm)	0.05		BDL	0.0004	ND-0.0004	NO	Erosion of Natural Deposit; Leaching
Metolachlor (ppb)	N/A		0.23	0.3	0.16-0.3	NO	Herbicide runoff
Nickel (ppb)	NA		BDL	2.1	ND - 2.1	NO	Erosion of Natural Deposit; Leaching
pH (Units)	6.5-8.5		7.8	8.3	7.3-8.3	NO	
Sodium (ppm)	NA		46	160	13-160	NO	Erosion of Natural Deposit; Leaching
Sulfate (ppm)	250		45	178	6.8-178	NO	Erosion of Natural Deposit; Leaching

Violation Consumer Confidence Reports (CCR) Report 07/01/22 - 08/09/22- IDEM did not receive original copy of CCR. Additional copy delivered 08/09/22.

UNTREATED SOURCE WATER DATA			SYSTEM WIDE [AVG]	SYSTEM WIDE [MAX]	RANGE LOW-HIGH	VIOLATIONS
Cryptosporidium (org/10L)	N/A	N/A	1.8	10	ND-10 oocysts/10L	
Giardia (org/10L)	N/A	N/A	10	86	ND-86 cysts/10L	
Total Organic Carbon (TOC) (ppm) Naturally present in the environment	N/A	N/A	3.9	7.1	2.6-7.1	NO

Testing for Cryptosporidium Cryptosporidium is a microscopic organism that lives in the intestines of animals and people. When ingested this microscopic pathogen may cause a disease called cryptosporidiosis, which has flu-like symptoms. Although there has been no cryptosporidium found in treated, drinking water, cryptosporidium is found in source water such as White River, Fall Creek and Eagle Creek Reservoir. The U.S. EPA has created the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) for the sole purpose of reducing illness linked with the contaminant Cryptosporidium and other disease-causing microorganisms in drinking water. The rule will bolster existing regulations and provide a higher level of protection of your drinking water supply.

DEFINITIONS

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

BDL (Below Detectable Limits) – laboratory analysis indicates the constituent is below detectable limits of the instruments and methods used to detect this constituent.

NA (Not Applicable) – not required to test for this constituent during the 2022 calendar year.

ND (Non-Detects) - laboratory analysis indicates that the constituent is not present.

PPM (Parts per million) - one part substance per million parts water (or milligrams per liter)

PPB (Parts per billion) - one part substance per billion parts water (or Micrograms per liter)

pCi/L (Picocuries per liter) - picocuries per liter is a measure of the radioactivity in water.

mrem/yr (Millirems per year) - measure of radiation absorbed by the body.

NTU (Nephelometric Turbidity Unit) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

MCL (Maximum Contaminant Level) - The "Maximum Allowed" (MCL) is 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 "Goal" (MCLG) is 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.

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.