

# Town of Collierville Water Quality Report – 2018



## IS MY DRINKING WATER SAFE?

The Town's water meets all of EPA's health standards. On a daily basis our water is tested for chlorine, fluoride, pH, carbon dioxide, and alkalinity. We also test for over 80 possible contaminants at intervals prescribed by the EPA.

## WHAT IS THE SOURCE OF MY WATER?

Your water comes from deep, underground aquifers, which is pumped directly to the one of four water treatment plants by ten wells for processing. All of the wells come from the Memphis Sands, about 350 feet deep. Our goal is to protect our water from contaminants and we are working with the State to determine the vulnerability of our water source to potential contamination. The Tennessee Department of Environment and Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the untreated water sources serving water for this system. The SWAP Report assesses the susceptibility of untreated water sources to potential for contamination. To ensure safe drinking water, all public water systems treat and routinely test their water. Water sources have been rated as reasonably susceptible, moderately susceptible or slightly susceptible based on geologic factors and human activities in the vicinity of the water source. The Town of Collierville Water System sources rated as moderately susceptible to potential contamination.

An explanation of Tennessee's Source Water Assessment Program, the Source Water Assessment summaries, susceptibility scorings and the overall TDEC report to EPA can be viewed online at <https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/source-water-assessment.html> or you may contact the Water System to obtain copies of specific assessments.

## WHY ARE THERE CONTAMINANTS IN MY WATER?

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 Environmental Protection Agency'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 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 they may be present in source water:

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

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

## HOW CAN I GET INVOLVED?

Information regarding the water system is available for review at the Public Services office at 500 Keough Road. Capital improvement projects are presented at the Mayor and Board of Aldermen meetings on the 2<sup>nd</sup> and 4<sup>th</sup> Mondays of each month. Please feel free to participate in these meetings.

## IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OUR OPERATIONS?

The State and EPA require us to test and report on our water on a regular basis to ensure its safety. The town's water meets all State and Federal water quality requirements. We want you to know that the town abides by all the rules and regulations set forth by the EPA and State of Tennessee.

## OTHER INFORMATION

Approximately every two years the state performs an inspection of our water system known as a sanitary survey. The town's water system scored a 98.8 out of 100 on the most recent survey run in 2017, placing our system on the State's approved list of public water supplies. The Town has developed a wellhead protection plan that is on file with the State, to evaluate and prevent potential contaminants from entering the aquifer near our production wells. The wellhead protection plan is available for review in the Public Services offices located at 500 Keough Road, from 7:00 am to 5:00 pm Monday through Friday.

## DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people 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)

## Pharmaceuticals In Drinking Water

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect the environment. Keep medications out of Tennessee's waterways by disposing in one of our permanent take back bins. There are nearly 100 take back bins located across the state, to find a location please visit: <https://www.tn.gov/environment/news/2015/9/21/tdec-provides-more-options-for-pharmaceutical-drug-disposal.html>

**For more information about your drinking water please contact Richard Mills at 901-457-2800.**

**Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.**

# Water Quality Data



## What does this chart mean?

- MCLG: Maximum Contaminant Level Goal, or 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
- MCL: maximum Contaminant Level, or 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.
- Discretionary language regarding the use of averages to report levels of some 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.
- 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 the control of microbial contaminants.
- AL – Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- BDL- Below Detection Limit
- RCTR – Revised Total Coliform Rule. This rule went into effect April 1, 2016 and replaces the MCL for total coliform with a Treatment Technique Trigger for a system assessment.
- TT – Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.
- 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.

Contaminant (units)	MCLG	MCL	Level Found	Range of Detection	Violation	Date of Sample	Typical Source of Contaminant
Total Coliform Bacteria (RCTR) (%)	0	TT Trigger	0	0-1.67	No	Dec '18	Naturally present in the environment.
E. coli Bacteria	0	TT Trigger	0	0	No	Dec '18	Human or animal waste.
<b>Inorganic Contaminants</b>							
Lead (ppb)	0	AL=15	90 <sup>th</sup> %=6.7	BDL-150	No	Jul '17	Corrosion of household plumbing systems; erosion of natural products. We had 2 of 30 sites exceeded the action level.
Nitrate (ppm)	10	10	0.454 avg.	0.179-0.409	No	Mar '18	Erosion of natural deposits.
Fluoride (ppm)	4	4	0.696 avg.	0.547-0.669	No	Oct '18	Water additive which promotes strong teeth.
Copper (ppm)	1.3	AL = 1.3	90 <sup>th</sup> %=0.0486	0.00286-0.273	No	Jul '17	Corrosion of household plumbing systems; erosion of natural products. We had 0 sites exceed the action level.
Chromium (ppb)	100	100	0.59 avg.	BDL-6.3	No	Sep '13	Discharge from steel and pulp mills; erosion of natural deposits.
<b>Volatile Organic Contaminants</b>							
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.12 avg.	0.65-1.61	No	Dec '18	Water additive used to control Microbes.
Tetrachloroethene (ppb)	0	5	0.0 avg.	BDL-0.503	No	Dec '18	Discharge from factories and dry cleaners.
<b>Unregulated Contaminants</b>							
Sodium (ppm)	n/a	n/a	8.16 avg.	5.69-10.6	No	May '17	n/a
Alkalinity (ppm)	n/a	n/a	28.35 avg.	14-41	No	Dec '18	n/a
Chromium, Hexavalent (ppb)	n/a	n/a	0.14 avg.	0.05-0.22	No	Sep '13	n/a
Strontium (ppb)	n/a	n/a	10.39 avg.	0.3-14	No	Sep '13	n/a
Vanadium (ppb)	n/a	n/a	0.20 avg.	BDL-.020	No	Sep '13	n/a
<b>Radioactive Contaminants</b>							
Gross Alpha (pCi/L)	0	15	2.07 avg.	1.4-2.9	No	Apr '14	Erosion of natural deposits.
Combined Radium 226/228 (pCi/L)	0	5	1.44 avg.	1.22-1.87	No	Apr '14	Erosion of natural deposits.

**Unregulated Contaminants:** Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. For additional information call the Safe Drinking Water Hotline at (800) 426-4791.

**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 Town of Collierville 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 and 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>.

**Chlorine:** Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

**Abbreviations:** • ppb or micrograms/L: parts per billion or micrograms per liter, explained in terms of money as one penny in \$10,000,000 • ppm or mg/L: parts per million or milligrams per liter, explained in terms of money as one penny in \$10,000 • n/a: not applicable • NTU: Nephelometric Turbidity Units, used to measure clarity in drinking water. Turbidity in excess of 5 NTUs is just noticeable to the average person. • MFL: million fibers per liter, used to measure asbestos concentration. • AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. • TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water, BDL: Below Detection Limit, pCi/L: Picocuries per Liter, avg.: average.

**About the data:** We monitor for some contaminants less than once per year, and for those detected contaminants, the date of the last sample is shown in the table.