

Deerfield Water System CCR 2022

Annual Water Quality Report 2022

In order to ensure that tap water is safe to drink, EPA and the Tennessee Department of Environment and Conservations prescribe regulations which 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.

The Source of Your Water

Deerfield Water System is served by eight (8) wells that have been declared true ground water. The only treatment required is disinfection. There is approximately 18 miles of line, with 465 connections.

Wellhead Protection

Water is supplied to the system by underground wells, each individual must practice due diligence in protecting the water source from contamination by refraining from using any liquids, paints, chemicals, etc. within a 750 ft. radius of the well. If you see any questionable materials within this area, please report immediately.

The Wellhead Protection Plan is available for public review. You may contact Tyler Proffitt at the Deerfield Office between 10:00 am and 4:00 pm to review the Wellhead Protection Plans.

Contaminants in Your Water

Drinking water, including bottled water, may reasonably be expected to contain at least a small amount of contaminants. The presence of contaminants does not indicate that the drinking water possesses a risk for health. For more information, call the EPA's Safe Drinking Water Hotline at (800) 426-4791.

The Sources of drinking water (both tap and bottled water) include surface sources and wells. As water travels through the surface of the land or through the ground, it dissolves naturally occurring mineral, and in some cases, radioactive materials, and pick up substances resulting from animals or from human activity.

Inorganic contaminants, such as salt and metals, can be natural occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Microbial Contaminants

Microbial contaminants are organisms such as viruses and bacterial, which may come from sewage treatment plants, septic systems, agricultural livestock, operations and wildlife. Inorganic contaminants, such as salt and metals, can be naturally occurring or result from urban storm runoff, industrial and domestic discharges, oil and gas production, mining, and farming.

Pesticides and Herbicides

Pesticides and herbicides may come from a variety of sources, such as agriculture, urban storm runoff, and residential use.

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Organic Chemical Contaminants

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban runoff, and septic systems.

Radioactive Contaminants

Radioactive Contaminants can be naturally occurring or be the result of oil and gas productions and mining activities.

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. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 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.
- MRDL: Maximum Residual Disinfectant 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 the 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.
- AL - Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- Below Detection Level (BDL) - laboratory analysis indicates that the contaminant is not present at a level that can be detected.
- Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present.
- Parts per million (ppm) or Milligrams per liter (mg/l) – explained as a relation to time and money as one part per million corresponds to one minute in two years or a single penny in \$10,000.
- Parts per billion (ppb) or Micrograms per liter - explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
- Millirems per year (mrem/yr) - measure of radiation absorbed by the body.
- Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
- Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- RTCR – Revised Total Coliform Rule. This rule went into effect on April 1, 2016 and replaces the MCL for total coliform with a Treatment Technique Trigger for a system assessment.

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Contaminant	Violation Y/N	Level Found	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria RTCR	NO	0		Monitored monthly		0	0	Naturally present in the environment
E coli Bacteria	NO	0		Monitored monthly		0	0	Human or animal waste
Gross Alpha	NO	0.78	0.356-1.21	12-13-2019	PCi/l	0	15	Erosion of natural deposits
Lead**	NO	0.0	ND-4.0	6-22-2022 12-13-2022	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Copper**	NO	0.126 0.12	0.010-.0997 0.007-0.23	6-22-2022 12-13-2022	ppm	1.3	AL=1.3	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate	NO	0.458 – 2.26	0.458 -2.26	6-17-2022	ppm	10	10	Runoff from fertilizer use, leaching from septic tanks, sewage; erosion of natural deposits
Simazine**	NO	0 – 0.0634		6-27-2022	ppb	4	4	Herbicide runoff
Atrazine**	NO	ND		6-27-2022	ppb	3	3	Runoff from herbicide used on row crops
Alachlor (Lasso)**	NO	ND		6-27-2022	ppb	0	2	Runoff from herbicide used on row crops
Barium	NO	0.009 – 0.481	0.009 – 0.481	6-27-202	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
TTHM Total Trihalomethanes	NO	<0.0005	Samples not received or taken	9-22-2022	ppm	0.0005	80	By-product of drinking water chlorination
HAA5 Haloacetic Acids	NO	<0.002	Samples not received or taken	9-22-2022	ppm	0.002	60	By-product of drinking water chlorination
Chlorine	NO	0.9 – 1.5		Monitored monthly	ppm	4	4	Water additive to control microbes

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

* Analysis is based on all active wells in 2022

**Monitoring Violation- See Public Notice at the end of this document for further explanation

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Health Effects

Microbiological Contaminants:

Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Fecal coliform/E.coli. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

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. Deerfield Water System 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 the 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 the EPA Website.** www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water

Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

TTHMs [Total Trihalomethanes]. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

HAA [Haloacetic Acids]. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

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Atrazine. Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

Simazine. Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

General Health Effects

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).”

Deerfield Water System Public Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for Deerfield Resort Water System

Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we are doing to correct these situations.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards. During 2022, we did complete all monitoring or testing for the contaminants listed below and therefore cannot be sure of the quality of your drinking water during that time. What we failed to do is in regard to the reporting of the required reports to TDEC **

What should I do?

There is nothing to do at this time.

The table below lists the contaminant we did not properly test for during the last year, how often we are supposed to sample for, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be taken).

Contaminant	Required Sampling Frequency	Number of Samples Taken	When Samples Should Have Been Taken	When Samples Were Taken
SOC's	1 Sample per (3) Years	0	Due April-June, 2020	Samples were taken 06-27-2022
Ground Water Rule	Daily	0	1-1-2022 thru 1-31-2022	MOR's were submitted late after

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				violation was received
Ground Water Rule	Daily	0	2-1-2022 thru 2-28-2022	MOR's were submitted late after violation was received
Ground Water Rule	Daily	0	3-1-2022 thru 3-31-2022	MOR's were submitted late after violation was received
Ground Water Rule	Daily	0	4-1-2022 thru 4-30-2022	MOR's were submitted late after violation was received
Lead and Copper	Semi Annual	20 20	6-22-2022 12-13-2022	Failed to submit Certification reports in a timely manner
Ground Water Rule	Daily	30	4-1-2021 thru 4-30-2021	MOR's were submitted late after violation was received

Deerfield Water System has enlisted the assistance of Communities Unlimited to help us get back on track with all the required testing, and to have records in order. We are setting up a sampling schedule so that we can better complete with the time frame for all testing and reporting.

Deerfield Water System does not have a board of directors. For questions or comments, please contact **Scott Fields or Tyler Proffitt**.

For more information, please contact Scott Fields at (423) 592-4222 or email at deersfields@gmail.com or Tyler Proffitt at 423-562-3282, ext. 1002 or email at tyler@fieldsreal.com.

*Please share this information with all who drink this water, especially those who may not have received this notice directly

This notice is being sent to you by **Deerfield Water System**. State Water System ID: **TN-0000912**.

Date Distributed: _____