



## 2023 Annual Drinking Water Quality Report

**MD0040004**

**CHESAPEAKE RANCH ESTATES**

Annual Water Quality Report for the period of January 1 to December 31, 2023

For more information regarding this report contact:

This report is intended to provide you with valuable information about your drinking water and the efforts made by the water system to provide safe drinking water.

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CHESAPEAKE RANCH ESTATES is Ground Water

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

## Sources of Drinking Water

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.

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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

## 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 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 can also come from gas stations, urban storm water 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 prescribes regulations which 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.

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).

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 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>.

PFAS – short for per- and polyfluoroalkyl substances – refers to a large group of more than 4,000 human-made chemicals that have been used since the 1940s in a range of products, including stain- and water-resistant fabrics and carpeting, cleaning products, paints, cookware, food packaging and fire-fighting

foams. These uses of PFAS have led to PFAS entering our environment, where they have been measured by several states in soil, surface water, groundwater, and seafood. Some PFAS can last a long time in the environment and in the human body and can accumulate in the food chain.

The Maryland Department of the Environment (MDE) conducted a PFAS monitoring program for Community Water Systems from 2020 to 2022. The results are available on MDE’s website: <https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx>.

The Environmental Protection Agency (EPA) proposed regulations for 6 PFAS compounds in drinking water in March 2023. The MCLs for PFOA and PFOS are proposed to be 4.0 parts per trillion (ppt). The proposal for HFPO-DA (GenX), PFBS, PFNA and PFHxS is to use a Hazard Index of 1.0 (unitless) to determine if the combined levels of these PFAS pose a risk and require action.

The 5<sup>th</sup> Unregulated Contaminant Monitoring Rule (UCMR5) began testing for 29 PFAS compounds and lithium in 2023, and testing will run through 2025. The UCMR5 should test all community water systems with populations of at least 3300 people. Three randomly selected systems in Maryland with populations less than 3300 people will also be tested under the UCMR5. Detections greater than the minimum reporting levels for each constituent should be reported in the CCR.

The combined PFOA and PFOS concentration from samples taken from our water system was **below the detection limit**. Our water system was tested for PFAS in 2023. In March 2023, EPA announced proposed Maximum Contaminant Levels (MCLs) of 4 ppt for PFOA and 4 ppt for PFOS, and a Group Hazard Index for four additional PFAS compounds. Future regulations would require additional monitoring as well as certain actions for systems above the MCLs. EPA will publish the final MCLs and requirements by the end of 2023 or beginning of 2024. Additional information about PFAS can be found on the MDE website: [mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx](https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx)

## Source Water Information:

| <b>SWA=Source Water Assessment</b><br><b>Source Water Name</b> | <b>Type of Water</b> | <b>Report Status</b> | <b>Location</b>   |
|--|----------------------|----------------------|---|
| BONANZA TRAIL WELL 3A CA880667                                 | GW                   | Y                    | NEAR 3 MI W OF LUSBY APPROX. 75 FT E OF BONANZA TRAIL   |
| CLUB HOUSE DR WELL 1R CA940409                                 | GW                   | Y                    | LUSBY APPROX. 50 FT E OF BUENA VISTA ROAD               |
| GUNSMOKE TRAIL WELL 4 CA883340                                 | GW                   | Y                    | NEAR 5 SE OF LUSBY APPROX. 600 FT N OF GUNSMOKE TRAIL   |
| THUNDERBIRD DR. WELL 2R CA190021                               | GW                   | Y                    | NEAR 3 MI SE OF LUSBY APPROX. 60FT E OF THUNDERBIRD TR. |

# 2023 Regulated Contaminants Detected:

**Definitions:**

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

- Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- Maximum Contaminant Level or 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.
- 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.
- Maximum Contaminant Level Goal or 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.
- 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.
- 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 control of microbial contaminants.
- Maximum residual disinfectant level goal or MRDLG: 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.
- mrem: Millirems per year (a measure of radiation absorbed by the body).
- ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
- Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

## Water Quality Test Results

| Disinfectants and Disinfection By-Products | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG      | MCL      | Units | Violation | Likely Source of Contamination           |
|--|-----------------|------------------------|--------------------------|-----------|----------|-------|-----------|--|
| Chlorine                                   | 2023            | 1.1                    | 1 - 1.1                  | MRDLG = 4 | MRDL = 4 | ppm   | N         | Water additive used to control microbes. |

|   |                 |                        |                          |                       |     |       |           |  |
|---|-----------------|------------------------|--------------------------|-----------------------|-----|-------|-----------|--|
| <b>Haloacetic Acids (HAA5)</b>  | 08/25/2022      | 4                      | 3.1 - 4                  | No goal for the total | 60  | ppb   | N         | By-product of drinking water disinfection.   |
| <b>Total Trihalomethanes (TTHM)</b>   | 08/25/2022      | 16.4                   | 8.3 - 16.4               | No goal for the total | 80  | ppb   | N         | By-product of drinking water disinfection.   |
| <b>Inorganic Contaminants</b>   | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG                  | MCL | Units | Violation | Likely Source of Contamination   |
| <b>Arsenic - While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.</b> | 2023            | 9                      | 5.6 - 9                  | 0                     | 10  | ppb   | N         | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.                    |
|   |                 |                        |                          |                       |     |       |           |  |
| <b>Fluoride</b>   | 10/18/2022      | 0.35                   | 0.35 - 0.35              | 4                     | 4.0 | ppm   | N         | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |

| Radioactive Contaminants | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination |
|--------------------------|-----------------|------------------------|--------------------------|------|-----|-------|-----------|--------------------------------|
| Combined Radium 226/228  | 09/03/2020      | 0.4                    | 0.1 - 0.4                | 0    | 5   | pCi/L | N         | Erosion of natural deposits.   |

| Lead and Copper | Date Sampled | MCLG | Action Level (AL) | 90 <sup>th</sup> Percentile | # of Sites over AL | Units | Violation | Likely source of contamination.   |
|-----------------|--------------|------|-------------------|-----------------------------|--------------------|-------|-----------|---|
| Copper          | 2023         | 1.3  | 1.3               | 0.08 mg/L                   | 0                  | ppm   | N         | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| Lead            | 2023         | 0    | 15                | <0.002 mg/L                 | 0                  | ppb   | N         | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |

Definitions:

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for margin of safety.

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

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. Chesapeake Ranch Water Co. is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Chesapeake Ranch Water Co. at 410-326-4122. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

| <i>Volatile Organic Contaminants</i> | <i>Collection Date</i> | <i>Highest Level Detected</i> | <i>Range of Levels Detected</i> | <i>MCLG</i> | <i>MCL</i> | <i>Units</i> | <i>Violation</i> | <i>Likely Source of Contamination</i>                                     |
|--------------------------------------|------------------------|-------------------------------|---------------------------------|-------------|------------|--------------|------------------|---|
| Ethylbenzene                         | 01/30/2017             | 2.71                          | 0 - 2.71                        | 700         | 700        | ppb          | N                | Discharge from petroleum refineries.                                      |
| Xylenes                              | 01/30/2017             | 0.01<br>951                   | 0 -<br>0.01951                  | 10          | 10         | ppm          | N                | Discharge from petroleum factories;<br>Discharge from chemical factories. |

| <b>UCMR 4 Unregulated Contaminant Rule</b> | Average      | Range          |
|--|--------------|----------------|
| HAA5                                       | 2.22<br>ug/L | 3 - 3          |
| HAA6Br                                     | 1.32<br>ug/L | 3 - 3          |
| HAA9                                       | 3.20<br>ug/L | 3 - 3          |
| Manganese                                  | .53 ug/L     | .465 -<br>.595 |

If you have any questions regarding this Water Quality Report, you may contact the following:

**Warren Prince, Chief Operating Engineer**

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The Board of Directors of Chesapeake Ranch Water Company meets at 6:30 pm on the 3<sup>rd</sup> Thursday of each month.