*Mountain Home Water Department*

## 2018 Annual Drinking Water Quality Report

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand, and be involved in, the efforts we make to continually improve the water treatment process and protect our water resources.

### *Where Does Our Drinking Water Come From?*

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our source is surface water from Norfork Lake.

### *How Safe Is The Source Of Our Drinking Water?*

The Arkansas Department of Health has completed a Source Water Vulnerability Assessment for Mountain Home Water Department. The assessment summarizes the potential for contamination of our source of drinking water and can be used as a basis for developing a source water protection plan. Based on the various criteria of the assessment, our water source has been determined to have a low susceptibility to contamination. You may request a summary of the Source Water Vulnerability Assessment from our office.

### *What Contaminants Can Be In Our Drinking Water?*

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, 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 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 assure tap water is safe to drink, EPA has 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.

### *Am I at Risk?*

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. However, 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 small amounts of contamination. These people should seek advice about drinking water from their health care providers. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791. In addition, EPA/CDC guidelines on appropriate means to lessen the risk of infection by microbiological contaminants are also available from the Safe Drinking Water Hotline.

### *What is Cryptosporidium?*

*Cryptosporidium* is a microbial pathogen found in surface water throughout the U.S. It lives and reproduces only with the host. In the environment, *Cryptosporidium* exists as a thick walled oocyst, containing four organisms. Monitoring by Mountain Home Waterworks in 2018 indicated no presence of oocysts in our Norfork Lake water source. It is important to know that although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

### *Lead and Drinking Water*

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 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.

### *How Can I Learn More About Our Drinking Water?*

If you have any questions about this report or concerning your water utility, please contact Michael Vincent, Water Treatment Plant Supervisor, at 870-425-5115. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our meetings at City Hall Council Chambers. Our meetings are held the second Thursday of each month at 4:45 PM.

## TEST RESULTS

We routinely monitor for constituents in your drinking water according to Federal and State laws. The test results table shows the results of our monitoring for the period of January 1st to December 31st, 2018. In the table you might find terms and abbreviations you are not familiar with. To help you better understand these terms we've provided the following definitions:

**Action Level** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
**Maximum Contaminant Level (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.
**Maximum Contaminant Level Goal (MCLG)** – unenforceable public health 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.
**Maximum Residual Disinfectant Level (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 (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.
**Nephelometric Turbidity Unit (NTU)** – a unit of measurement for the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
**Parts per billion (ppb)** - a unit of measurement for detected levels of contaminants in drinking water. One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
**Parts per million (ppm)** – a unit of measurement for detected levels of contaminants in drinking water. One part per million corresponds to one minute in two years or a single penny in $10,000.

| TURBIDITY | | | | | | |
|---|---|---|---|---|---|---|
| Contaminant | Violation Y/N | Level Detected | Unit | MCLG (Public Health Goal) | MCL (Allowable Level) | Major Sources in Drinking Water |
| Turbidity | N | Highest yearly sample result: 0.07<br>Lowest monthly % of samples meeting the turbidity limit: 100% | NTU | NA | Any measurement in excess of 1 NTU constitutes a violation<br>A value less than 95% of samples meeting the limit of 0.3 NTU, constitutes a violation | Soil runoff |

♦ Turbidity is a measurement of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

| INORGANIC CONTAMINANTS | | | | | | |
|---|---|---|---|---|---|---|
| Contaminant | Violation Y/N | Level Detected | Unit | MCLG (Public Health Goal) | MCL (Allowable Level) | Major Sources in Drinking Water |
| Fluoride | N | Average: 0.89<br>Range: 0.71 – 1.33 | ppm | 4 | 4 | Erosion of natural deposits; water additive which promotes strong teeth |
| Nitrate [as Nitrogen] | N | 0.20 | ppm | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |

| LEAD AND COPPER TAP MONITORING | | | | | |
|---|---|---|---|---|---|
| Contaminant | Number of Sites over Action Level | 90th Percentile Result | Unit | Action Level | Major Sources in Drinking Water |
| Lead | 0 | 0.005 | ppm | 0.015 | Corrosion from household plumbing systems; erosion of natural deposits |
| Copper | 0 | 0.15 | ppm | 1.3 | |

♦ We are currently on a reduced monitoring schedule and required to sample once every three years for lead and copper at the customers' taps. The results above are from our last monitoring period in 2016. Our next required monitoring period is in 2019.

**TOTAL ORGANIC CARBON**

♦ The percentage of Total Organic Carbon (TOC) removal was routinely monitored in 2018 and all TOC removal requirements set by USEPA were met. TOC has no health effects. However, Total Organic Carbon provides a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs).

| REGULATED DISINFECTANTS | | | | | | |
|---|---|---|---|---|---|---|
| Disinfectant | Violation Y/N | Level Detected | Unit | MRDLG (Public Health Goal) | MRDL (Allowable Level) | Major Sources in Drinking Water |
| Chlorine | N | Average: 1.33<br>Range: 0.34 – 2.01 | ppm | 4 | 4 | Water additive used to control microbes |

| BY-PRODUCTS OF DRINKING WATER DISINFECTION | | | | | |
|---|---|---|---|---|---|
| Contaminant | Violation Y/N | Level Detected | Unit | MCLG (Public Health Goal) | MCL (Allowable Level) |
| HAA5 [Haloacetic Acids] | N | Highest Running 12 Month Average: 30<br>Range: 0 – 40.8 | ppb | 0 | 60 |
| TTHM [Total Trihalomethanes] | N | Highest Running 12 Month Average: 50<br>Range: 12 – 64.8 | ppb | NA | 80 |
| Chlorite | N | Highest Annual Quarterly Average: 575<br>Range: 274 - 695 | ppb | 800 | 1000 |

| UNREGULATED CONTAMINANTS | | | | |
|---|---|---|---|---|
| Contaminants | Levels Detected | Unit | MCLG (Public Health Goal) | Major Sources in Drinking Water |
| Chloroform | Average: 10.21<br>Range: 4.12 – 16.9 | ppb | 70 | By-products of drinking water disinfection |
| Bromodichloromethane | Average: 3.30<br>Range: 1.51 – 5.09 | ppb | 0 | |
| Dibromochloromethane | Average: 0.98<br>Range: 0 – 1.20 | ppb | 60 | |

| Metals | | | |
|---|---|---|---|
| Contaminant | Level Detected | Unit | Major Sources in Drinking Water |
| Manganese (UCMR4) | Average: 0.63<br>Range: 0.42 – 0.84 | ppb | Naturally occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient. |

| INDICATORS FOR HAA FORMATION | | | |
|---|---|---|---|
| Contaminant | Level Detected | Unit | Major Sources in Drinking Water |
| Total Organic Carbons (TOC) (UCMR4) | Average: 2.67<br>Range: 2.19 – 3.29 | ppb | Naturally occurring |
| Bromide (UCMR4) | 18.4 | ppm | By-product of drinking water disinfection |

| HAA Groups | | | |
|---|---|---|---|
| Contaminant | Level Detected | Unit | Major Sources in Drinking Water |
| Dichloroacetic acid- DCAA (UCMR4) | Average: 14.5<br>Range: 6.2 – 33.4 | ppb | By-product of drinking water disinfection |
| Monochloroacetic acid- MCAA (UCMR4) | Average: 2.94<br>Range: 2.0 – 5.2 | ppb | |
| Trichloroacetic acid- TCAA (UCMR4) | Average: 11.04<br>Range: 4.0 – 23 | ppb | |
| Monobromoacetic acid- MBAA (UCMR4) | Average: 0.65<br>Range: 0.5 – 1.0 | ppb | |
| Dibromoacetic acid- DBAA (UCMR4) | Average: 0.37<br>Range: 0.3 – 0.4 | ppb | |
| Bromochloroacetic acid- BCAA (UCMR4) | Average: 2.04<br>Range: 1.4 – 3.0 | ppb | |
| Bromodichloroacetic acid- BDCAA (UCMR4) | Average: 2.23<br>Range: 1.3 – 3.5 | ppb | |
| Chlorodibromoacetic acid- CDBAA (UCMR4) | Average: 0.875<br>Range: 0.3 – 2.1 | ppb | |

♦ The Objective of the UCMR program is to collect national occurrence data for suspected drinking water contaminants that do not have health-based standards set under the Safe Drinking Water Act. Drinking water occurrence information is used to support future regulatory actions to protect public health. The public will benefit from information about whether or not unregulated contaminants are present in their drinking water.

♦ 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. MCLs (Maximum Contaminant Levels) and MCLGs (Maximum Contaminant Level Goals) have not been established for all unregulated contaminants.