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# Mountain Home Air Force Base and Strike Dam Recreational Center

## Drinking Water Quality Consumer Confidence Report (CCR) for 2021 Reporting Period

## **Executive Summary**

The Mountain Home Air Force Base (MHAFB) water system produces high quality water and meets Environmental Protection Agency (EPA) standards to ensure all consumers receive safe drinking water. As such, the base is pleased to announce the availability of the annual Drinking Water Consumer Confidence Report (CCR). This report is a summary of water quality during the 2021 calendar year. Included are details about where your water comes from, what it contains, and how it compares to EPA and state standards. We are committed to providing you with information because informed citizens are our best allies.

Last year, Bioenvironmental Engineering conducted more than 200 tests for over 70 contaminants. Of these contaminants, only one [nitrates] was detected above the Maximum Contaminant Level (MCL) at Well #9, which was dedicated to the Air Traffic Control Tower. For Well #9, personnel were advised in 2016 not to drink the water and were supplied with bottled water for all consumption purposes. The Air Traffic Control Tower is now tied into the distribution system and Well #9 has been permanently taken offline. All other contaminants were either not detected or within EPA standards. Five Tier 3 – failure to monitor – violations were received for not conducting sampling. Volatile organic compound (VOC) sampling at Well #2 and Well #14, synthetic organic chemicals (SOC) at Well #2 and Well #14, and gross alpha radiation at Well #2. Per the Idaho Department of Environmental Quality (IDEQ), consumer notification is requested for violations and more information can be found in Section IV, Compliance Violations, and Section VI, Level of Detected Contaminants, of this report.

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# 2020 Consumer Confidence Report (CCR)

## I. WATER SYSTEM INFORMATION

*Water System Name:*

|  |                   |
|--|-------------------|
| Mountain Home Air Force Base                   | PWS ID #: 4200054 |
| Mountain Home AFB Strike Dam Recreational Area | PWS ID #: 4200088 |

*Water System Operator:*

|                   |   |
|-------------------|---|
| Mr. Jeffery White | 366 CES/CEOIU                                     |
| (208) 828-3391    | Water Fuels Systems Maintenance                   |
|                   | 750 Liberator Street, Bldg. 1400, MHAFB, ID 83648 |

*Water Program Manager:*

|                       |  |
|-----------------------|--|
| Mr. Michael McDaniels | 366 FW/A7IE                                    |
| (208) 828-6351/1761   | Environmental Office                           |
|                       | 1100 Liberator St, Bldg. 1297, MHAFB, ID 83648 |

*Health Compliance Office:*

|                              |  |
|------------------------------|--|
| Bioenvironmental Engineering | 366 OMRS/SGPB                              |
| (208) 828-7270               | 90 Hope Drive, Bldg. 6003, MHAFB, ID 83648 |

|                           |                               |                                      |
|---------------------------|-------------------------------|--------------------------------------|
| <i>Population Served:</i> | <i>Number of Connections:</i> | <i>Date of CCR Distribution:</i>     |
| 7,500                     | 1,200                         | 1 July 2022 (for calendar year 2021) |

*Regularly Scheduled Meeting(s):*

MHAFB Drinking Water Working Group meets quarterly. For more information, contact Michael McDaniels, Water Program Manager, 366 FW/A7IE, Mountain Home AFB, ID. Phone: (208) 828-1761.

## II. WATER SOURCES

|   |         |       |  |
|---|---------|-------|--|
| <i>Groundwater Sources (springs, wells, infiltration galleries):</i>                              |         |       |  |
| Wells - MHAFB produces water from the well field within permeable zones of the Bruneau Formation. |         |       |  |
| Source # 1  | Well 2  | BPW 2 | Location: Mountain Home AFB              |
| Source # 2  | Well 9  | BPW 9 | Location: Mountain Home AFB              |
| Source # 3  | Well 10 | BPW10 | Location: Mountain Home AFB / Strike Dam |
| Source # 4  | Well 13 | BPW13 | Location: Mountain Home AFB              |
| Source # 5  | Well 14 | BPW14 | Location: Mountain Home AFB              |

|   |          |       |                             |
|---|----------|-------|-----------------------------|
| <i>Emergency-Use-Only Sources (springs, wells, infiltration galleries):</i> |          |       |                             |
| Source # 1  | Well 12* | BPW12 | Location: Mountain Home AFB |

\*Well 12 was designated an Emergency-Use-Only Well in July 2019 and is to be used only in the event of mechanical or electrical failure of other Groundwater Sources or to provide fire suppression flow. If used in this capacity, you will be notified in this Consumer Confidence Report.

### III. POTENTIAL SOURCES OF CONTAMINATION:

The sources of drinking water (both tap 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.

A potential point source of contamination is any facility that stores, uses, or produces, as a product or by-product, regulated contaminants. For a potential point source to be included in the potential contaminant source inventory, it must also have a potential for release of contaminants at levels that could pose a concern relative to drinking water sources. It is important to understand that a release may never occur from a potential contamination source if best management practices are being used. Many potential sources of contamination are regulated at the Federal or State level, or both, to reduce the risk of release. Therefore, when a business, military building, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, military building or property is in violation of any local, State, or Federal environmental laws or regulations. What this means is that the potential for contamination exists due to the nature of the business, military building operation, or type of activity on the property.

Sources that could potentially contaminate the drinking water supply for MHAFB include both point and non-point sources of contamination. Point sources of contamination occur at distinct locations. They are often regulated and require permits or registration for facilities that use, store, or sell those materials (such as fueling stations with leaking underground storage tanks). Non-point sources of contamination often occur over large areas and can result from normal everyday activities such as lawn chemical or agricultural activities.

#### *Potential Point Sources of Groundwater Contamination*

The IDEQ has performed source water assessments on each of MHAFB's wells. All wells in the MHAFB well field are moderately susceptible to contamination from inorganic chemicals, synthetic organic chemicals, and microbes.

#### *Potential Non-Point Sources of Groundwater Contamination*

The general land use surrounding MHAFB is a combination of both agricultural and small business/residential use. Non-point sources of contamination associated with these land uses are primarily agricultural chemicals including pesticides (insecticides and herbicides) and fertilizers. Additional potential non-point sources within the MHAFB Drinking Water/Wellhead Protection Zone include incorrect usage and disposal of Aqueous Film Forming Foam (AFFF), hazardous household chemicals such as cleaning solvents, used motor oil, and degreasers. Throughout the MHAFB Drinking Water/Wellhead Protection Zone, pesticides and small fuel storage cans used by military family housing may also pose threats to groundwater quality.

#### *Source Water Assessment or Protection Plan Available*

The MHAFB Water Contingency Response Plan was updated and signed in February of 2021. Please contact Mr. Michael McDaniels, Water Program Manager, 366 FW/A7IE, Mountain Home AFB, ID at (208) 828-1761 if you would like more information about the assessment.

#### IV. COMPLIANCE VIOLATIONS

|   |  |
|---|--|
| <b>Treatment Techniques:</b>              | <b>NONE.</b>   |
| <b>Monitoring/Reporting:</b>              | <b>ONE.</b>  |
|   | <ul style="list-style-type: none"> <li>- One Maximum Contaminant Level (MCL) violation was received for Well #9 due to Nitrate levels being higher than the MCL.</li> <li>- Three Tier 3–Failure to Monitor–Violations were received for Well #2 for not sampling Volatile Organic Compounds, Synthetic Organic Chemicals, and Gross Alpha.</li> <li>- Two Tier 3 – Failure to Monitor-Violations were received for Well #14 for not sampling Volatile Organic Compounds and Synthetic Organic Chemicals.</li> </ul> |
| <b>Public Notification/Recordkeeping:</b> | <b>CONDUCTED.</b>  |
|   | <ul style="list-style-type: none"> <li>- A “Do Not Drink Order” was posted for Well #9 from 2016-2021.</li> <li>- Tier 3 notifications are reported in this document.</li> </ul>   |
| <b>Special Monitoring Requirements:</b>   | <b>CONDUCTED.</b>  |
|   | <ul style="list-style-type: none"> <li>- Confirmatory samples required when compliance sample results exceed the MCL.</li> </ul>   |
| <b>Administrative or Judicial Orders:</b> | <b>NONE.</b>   |
| <b>Consent Orders:</b>                    | <b>NONE.</b>   |
| <b>Notice of Violations (NOV):</b>        | <b>NONE.</b>   |

#### *Monitoring and Reporting of Compliance Data Violations*

MHAFB received one MCL exceedance violation in 2021. The dedicated well for the Air Traffic Control Tower (Well #9) exceeded the 10 parts-per-million (ppm) MCL for nitrates with a measured 10.9 ppm, which drove quarterly sampling requirements and a “Do Not Drink Order” was posted from 2016-2021. Because the well was isolated from the base system, only the Tower was affected, and personnel in the Tower were provided bottled water for consumption from 2016-2021 when the well was taken offline, and the Tower was connected to the base water system.

MHAFB received Five Tier 3–Failure to Monitor–violations for failing to collect VOC and SOC samples at the required timeframe at Well #2 and Well #14, and a Gross Alpha sample at Well #2. The delinquent samples were, however collected and reported appropriately (see results in section VII of this report). Additionally, processes were implemented to avoid any future oversight.

## V. DEFINITIONS

### **Action Level (AL):**

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

### **Initial Distribution System Evaluation (IDSE):**

IDSE is an important part of the Stage 2 Disinfection By-Products Rule (DBPR). The IDSE is a one-time study conducted by some water systems, providing disinfection or chlorination, to identify distribution system locations with concentrations of Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). Water systems use results from the IDSE, in conjunction with Stage 1 DBPR compliance monitoring data, to select monitoring locations for Stage 2 DBPR. MHAFB completed the IDSE in calendar year 2012.

### **Environmental Protection Agency (EPA) Health Advisory:**

EPA has established health advisories for PFOS and PFOA based on the agency's assessment of the latest peer-reviewed science to provide drinking water system operators, and state, tribal and local officials who have the primary responsibility for overseeing these systems, with information on the health risks of these chemicals, so they can take the appropriate actions to protect their residents.

### **Maximum Contaminant Level (MCL):**

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.

### **Maximum Contaminant Level Goal (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 and are non-enforceable public health goals.

### **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.

### **Treatment Technique (TT):**

A required process intended to reduce the level of a contaminant in drinking water.

## VI. HEALTH INFORMATION

Some individuals may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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/Centers for Disease Control and Prevention (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 at 1-800-426-4791 or <https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline>

**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 at 1-800-426-4791 or <https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline>

**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. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

**Your water is treated by disinfection.** Disinfection involves the addition of chlorine or other disinfectants to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

**Contaminants that may be present in source water before treatment** 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.

**Per- and Poly-fluoroalkyl Substances (PFAS) Compounds - Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)**, which may come from a variety of sources such as firefighting foams, materials used to make carpets, stain and water-repellant fabrics and clothing, food packaging, as well as other materials (e.g., cookware) that are resistant to water, grease or stains.

**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.



## VII. WATER QUALITY DATA TABLES

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. A public water system is only required to report the most recent detections of any contaminant at each representative sampling location. Although many more drinking water contaminants were tested, in order to keep the consumer informed, the tables below list all of the contaminants (during the calendar year of this report unless otherwise noted) that were either:

1. detected;
2. had a violation associated with it;
3. are contaminants that are not sampled on an annual basis.

All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely cost prohibitive, and in most cases, would not provide an appreciable increase in protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. The EPA and the State of Idaho may require monitoring for certain contaminants less than once per year since concentrations of these contaminants do not vary significantly from year to year, or the system may not be considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In these tables, you will find terms and abbreviations that may not be familiar to you. To help you better understand these terms, we have provided their descriptions below.

### Terms and Descriptions

| Term                   | Description   |
|------------------------|---|
| ug/L                   | Number of micrograms of substance in one liter of water             |
| mg/L                   | Number of milligrams of substance in one liter of water             |
| ppm   mg/L             | parts per million, or milligrams per liter (mg/L) [interchangeable] |
| ppb   µg/L             | parts per billion, or micrograms per liter (µg/L) [interchangeable] |
| ppt   ng/L             | parts per trillion, or nanograms per liter (ng/L) [interchangeable] |
| pCi/L                  | picocuries per liter (a measure of radioactivity)                   |
| positive samples/month | Number of samples taken monthly that were found to be positive      |
| positive samples/year  | Number of positive samples taken that year                          |
| N/A                    | Not Applicable  |
| ND                     | Not Detected  |
| NR                     | Not Required to Monitor, but recommended.                           |

### Levels of Detected Chemical & Radiological Contaminants and the Potential Health Effects Associated with Long-term Exposure above the MCL

Unless otherwise noted, the data presented in the water quality tables below are from testing done between January 1, 2021 and December 31, 2021.

| Contaminant                                  | Most Recent Test | Violation | Your Water      |                            | MCL | MCLG | Common Sources of Contaminant in Drinking Water   | Potential Health Effects from Long-term Exposure above the MCL   |
|--|------------------|-----------|-----------------|----------------------------|-----|------|---|--|
|  |                  |           | Lowest Detected | Highest Detected           |     |      |   |  |
| Nitrate<br><i>ppm</i>                        | Mar 2021         | No        | 0.4             | 1.4<br><i>Wells #13/14</i> | 10  | 10   | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits | Infants < 6 months old who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and methoglobinemia (blue-baby syndrome). |
|  | Mar 2021         | Yes       |                 | 10.9*<br><i>Well #9</i>    |     |      |   |  |
| Radium-226/228<br>(Combined)<br><i>pCi/L</i> | Sept 2021        | No        | ND              | 5.04                       | 5** | 0    | Erosion of natural deposits   | Increased risk of cancer   |
| Trichloroethylene<br><i>ppb</i>              | Sept 2021        | No        | ND              | 0.68                       | 5   | 0    | Discharge from metal degreasing sites and other industrial operations                       | Liver problems; increased risk of cancer   |

\*Nitrate sampling result of 10.9 ppm only applied to base personnel that consumed drinking water from Well #9, which only served the Air Traffic Control Tower. Personnel in the Air Traffic Control Tower only consumed bottled water during the 2016-2021 No Drink Order.

\*\*MCL violations are determined by averaging four (4) quarterly samples. The average in 2021 was 2.22 pCi/L, well below the EPA MCL of 5 pCi/L.

### Levels of Disinfection Byproducts and the Potential Health Effects Associated with Long-term Exposure above the MCL

| Contaminant                                   | Date Tested | Violation | Your Water      |                  | MCL | MCLG | Common Sources of Contaminant in Drinking Water       | Potential Health Effects from Long-term Exposure above the MCL              |
|---|-------------|-----------|-----------------|------------------|-----|------|---|---|
|   |             |           | Lowest Detected | Highest Detected |     |      |   |   |
| Total Trihalomethanes<br>(TTHM)<br><i>ppb</i> | Sept 2021   | No        | 0.82            | 17.2             | 80  | N/A  | Byproduct of drinking water chlorination/disinfection | Liver, kidney, or central nervous system problems; increased risk of cancer |
| Total Haloacetic Acids (HAA5)<br><i>ppb</i>   | Sept 2021   | No        | ND              | 1.34             | 60  | N/A  | Byproduct of drinking water chlorination/disinfection | Increased risk of cancer  |

### Levels of Lead and Copper and the Potential Health Effects Associated with Long-term Exposure above the Action Level

| Contaminant                       | Date Tested | Violation | Your Water (80 Samples)     |                     | TT Action Level  | MCLG | Common Sources of Contaminant in Drinking Water                      | Potential Health Effects from Long-term Exposure above the MCL  |
|-----------------------------------|-------------|-----------|-----------------------------|---------------------|------------------|------|--|---|
|                                   |             |           | 90 <sup>th</sup> Percentile | # of Sites Above TT |                  |      |  |   |
| Lead <sup>2</sup><br><i>ppb</i>   | June 2021   | No        | ND                          | 0                   | 15 <sup>3</sup>  | 0    | Corrosion of household plumbing systems; erosion of natural deposits | <p>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.</p> <p>Adults who drink water containing Lead in excess of the Action Level over many years could develop kidney problems or high blood pressure.</p>  |
| Copper <sup>2</sup><br><i>ppm</i> | June 2021   | No        | 0.050                       | 0                   | 1.3 <sup>3</sup> | 1.3  | Corrosion of household plumbing systems; erosion of natural deposits | <p>Copper is an essential nutrient; however, people who drink water containing copper in excess of the Action Level over a short period of time could experience gastrointestinal distress.</p> <p>People who drink water containing copper in excess of the Action Level over many years could suffer liver or kidney damage.</p> <p>People with Wilson's Disease should consult their health care provider if the amount of copper in their water exceeds the Action Level.</p> |

<sup>2</sup>Lead and Copper samples were taken in June 2021.

<sup>3</sup>Lead and Copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10 percent of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L. *NOTE:* 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. Mountain Home Air Force Base 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 <http://www.epa.gov/safewater/lead>.

### Maximum Residual Disinfectant Levels of Chlorine and the Potential Health Effects Associated with Long-term Exposure above the MCL

| Contaminant             | Date Tested | Violation | Your Water |                  | MRDL | MRDLG | Common Sources of Contaminant in Drinking Water | Potential Health Effects from Long-term Exposure above the MCL |
|-------------------------|-------------|-----------|------------|------------------|------|-------|---|--|
|                         |             |           | Average    | Highest Detected |      |       |   |  |
| Chlorine<br><i>mg/L</i> | 2021        | No        | 0.72       | 0.889            | 4    | 4     | Water additive used to control microbes         | Eye/nose irritation; stomach discomfort                        |

## VIII. SPECIFIC CONTAMINANT REQUIREMENTS

Specific requirements of contaminants are listed below the corresponding data tables in the previous section.

## IX. CONTACT INFORMATION:

Contact Name: Bioenvironmental Engineering  
Address: 90 Hope Drive, Bldg. 6003  
Mountain Home AFB, ID 83648  
Phone: (208) 828-7270  
E-Mail: [usaf.mountain-home.366-mdg.mbx.bioenvironmental@mail.mil](mailto:usaf.mountain-home.366-mdg.mbx.bioenvironmental@mail.mil)

### Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit [www.epa.gov/watersense](http://www.epa.gov/watersense) for more information.