Idaho Department of Environmental Quality
Drinking Water Program

July 2023

Mountain Home Air Force Base and Strike Dam Recreational Center

Drinking Water Quality Consumer Confidence Report (CCR) for 2022 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~~ 2022 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.

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Last year, Bioenvironmental Engineering conducted tests for over 80 contaminants. We only detected 71 of those contaminants and found only 1 at a level higher than the EPA allows. The contaminant detected above the MCL was Nitrate found in Well # 12. Well # 12 is not connected to the distribution lines and is only used for emergency and contingency uses. All other wells within the used distribution lines are within allowed parameters for drinking water compliance. (For more information, please reference page 10 - Water Quality Table for Nitrate).

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2022 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
(208) 828-3391
366 CES/CEOIU
Water Fuels Systems Maintenance
750 Liberator Street, Bldg. 1400, MHAFB, ID 83648

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

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

Population Served:	*Number of Connections:*	*Date of CCR Distribution:*
7,500	1,200	1 July 2023 (for calendar year 2022)

Regularly Scheduled Meeting(s):
MHAFB Drinking Water Working Group meets quarterly. For additional information, contact Mr. Michael McDaniels, Water Program Manager, 366 FW/A1IE. MHAFB, ID. Phone: (208)-828-1761.

II. WATER SOURCES

Groundwater Sources (springs, wells, infiltration galleries): 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 10	BPW10	Location: Mountain Home AFB / Strike Dam
Source # 3	Well 13	BPW13	Location: Mountain Home AFB
Source # 4	Well 14	BPW14	Location: Mountain Home AFB

Emergency-Use-Only Sources (springs, wells, infiltration galleries):			
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:

Drinking 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. In order to ensure that tap water is safe to drink, EPA prescribes regulations that 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4971).

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 land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presences of animals or human activities. 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. 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.

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 of Inorganic Chemicals, Synthetic Organic Chemicals, Disinfectants & Disinfection By-Products, Radioactive Materials, 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

Treatment Techniques:	**NONE.**
Monitoring/Reporting:	**FOUR**. - Failure to monitor violations occurred for Well # 13 and 3 RTCR sites.
Public Notification/Recordkeeping:	**CONDUCTED**. - Tier 3 notifications are reported in this document.
Special Monitoring Requirements:	**CONDUCTED.** - Confirmatory samples required when compliance sample results exceed the MCL.
Administrative or Judicial Orders:	**NONE**.
Consent Orders:	**NONE**.
Notice of Violations (NOV):	**NONE**.

Monitoring and Reporting of Compliance Data Violations

MHAFB received Four Tier 3–Failure to Monitor–violations for failing to collect SOC samples within the required timeframe at Well #13, and three bacteriological samples at routine sampling sites. 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

Term	Definition
MCLG	MCLG: Maximum Contaminant Level 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.
MCL	MCL: Maximum Contaminant Level: 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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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	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 control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

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 and Adbsorption. Disinfection involves the addition of chlorine or other disinfectants to kill dangerous bacteria and microorganisms that may be in the water. Well # 2 is also treated by adsorption, accomplished by passing the water through a substance, such as activated carbon or alumina, to the water supply. Adsorbents attract contaminants by chemical and physical processes that cause them to "stick" to their surfaces for later disposal

Contaminants that may be present in source water *before treatment* include:

Microbiological 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, corrosion of plumbing systems, 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, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. 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 expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table

Term	Definition
µg/L	µg/L : Number of micrograms of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
ppt	ppt: parts per trillion, or nanograms per liter
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
MFL	MFL: million fibers per liter, used to measure asbestos concentration
% positive samples/month	% positive samples/month: Percent of samples taken monthly that were positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.
positive samples	positive samples/yr: The number of positive samples taken that year

Unless otherwise specified, the data presented in the Water Quality Tables below are from the 2022 sampling period: January 2022- December 2022.

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

Contaminants	TT Range		Detected Range		Sample Frequency	Violation	Typical Source	Potential Health Effects from Long-Term Exposure above MCL
			Average	Highest				
Chlorine *(ppm)*	Min: 0.2	Max: 2.0	0.72	0.88	Monthly	No	Water additive used to control microbes	Eye/nose irritation; stomach discomfort

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

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source	Potential Health Effects from Long-Term Exposure above MCL
				Low	High				
Haloacetic Acids (HAA5) *(ppb)*	NA	60	2.44	1.61	2.44	2022	No	By-Product of drinking water chlorination	Liver, kidney, or central nervous system problems, increased risk of cancer
TTHMs [Total Trihalomethanes] *(ppb)*	NA	80	18.6	4.93	18.6	2022	No	By-Product of drinking water chlorination	Increased risk of cancer

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

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source	Potential Health Effects from Long-Term Exposure above MCL
				Low	High				
Nitrate *(ppm)* **Well # 12**	10	10	12.3	8.9	12.3	2022	No	Can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming	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).
Nitrate *(ppm)* **Distribution System**	10	10	6.9	2.1	6.9	2022	No		
Radium- 226/228 (Combined) *pCi/L*	0	5	1.73	1.33	1.73	2022	No	Erosion of natural deposits, oil and gas production, and mining activities	Increased risk of cancer
Chromium	100	100	3	2	3	2022	No	Can be naturally occurring or Industrial or domestic wastewater discharges	Irritation of nose, mouth, and eyes, may cause headaches, dizziness, nausea, and gastrointestinal distress.

NOTE: The high results were taken from Well #12, which is used only for emergency and contingency use. Original sampling occurred on 9/26/2022, Re-sampling occurred 12/20/2022, sample was 8.9 MG/L, which is below MCL.

Levels of Microbiological Contaminants the Potential Health Effects Associated with Long-term Exposure above MCL

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Frequency	Violation	Typical Source	Potential Health Effects from Long-Term Exposure above MCL
				Low	High				
Total Coliform	NA	Pos/Neg	Neg	NA	NA	Monthly	No	Naturally Present in the Environment	May cause gastrointestinal distress, vomiting, or fever.
E. Coli	0	Pos/ Neg	Neg	NA	NA	Monthly	No	viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife	Young Children and the Elderly are more susceptible to Gastrointestinal illness, Urinary tract infections, kidney failure.

NOTE: Total Coliform and E. Coli are routinely tested monthly at multiple sites across base. Sites are chosen based on If microbiological contaminants are present, repeat samples are taken to identify the cause of positives and ensure proper disinfection is occurring.

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

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Samples Taken (40)		Sample Date	Violation	Typical Source	Potential Health Effects from Long-Term Exposure above MCL
			90th Percentile	# Of sites above TT				
Lead *(ppb)*	**0**	**15**	**0**	**0**	**June 2022**	**No**	Corrosion of household plumbing systems; erosion of natural deposits	Infants and children could experience mental or physical developmental delays. Children could show slight deficits in attention span and learning abilities. Adults could develop kidney problems or high blood pressure.
	0	**15**	**0**	**0**	**Dec 2022**	**No**		
Copper *(ppb)*	**1.3**	**1.3**	**.05**	**0**	**June 2022**	**No**		Copper is an essential nutrient, long-term exposure above MCL can lead to gastrointestinal distress, liver or kidney damage.
	1.3	**1.3**	**.07**	**0**	**Dec 2022**	**No**		

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. ID4200054- Mountain Home AFB, ID4200088-Mountain Home AFB 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. For Copper: People with Wilson's Disease should consult their health care provider if the amount of copper in the water exceeds the Action Level.

VIII. ADDITIONAL MONITORING

As part of an on-going evaluation program, the EPA has required us to monitor additional contaminants/chemicals. These chemicals include PFOS/PFOAs. Information collected through the monitoring of these contaminants/chemicals will help to ensure that future decisions on drinking water standards are based on sound science. For more information, please visit the EPA website: https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas.

Levels of PFOS/PFOA Detected and Potential Health Effects

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Reported Level	Sample Date	Violation	Typical Source	Potential Health Effects
Perfluorooctansulfonic Acid (PFOS) *(ppb)*	NA	NA	.23	2021	No	Can result from industrial or domestic waster, consumer products, food packaging, and fire-fighting foam	Elevated cholesterol, changes in liver function, thyroid/hormone levels, and reduced immune system function.
Perfluorooctanoic Acid (PFOA) *(ppb)*	NA	NA	.21	2021	No		

NOTE: The sample results shown were results from 2021. Additional samples were taken in April of 2023, they will be distributed. There is currently not enough sample data to provide a low to high range analysis.

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@health.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 for more information