



2022 Calendar Year

WATER QUALITY

Consumer Confidence Report



PUBLIC WATER SYSTEM (PWS) INFORMATION

PWS Name: Freeport-McMoRan Bagdad Town

PWS Contact: Christina M Grijalva Environmental Scientist II (928) 925-4860 cgrijalv@fmi.com



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

Bagdad recommends that customers serving more than one housing unit (for example, apartments, nursing homes) as well as schools and businesses post a copy of this report in a conspicuous place.

ABOUT THIS REPORT

Freeport-McMoRan Bagdad Inc. (FMBI) is committed to providing a safe supply of drinking water to our customers. We issue this report by July 1st of every year describing the quality of your drinking water to comply with state and United States Environmental Protection Agency (EPA) regulations. Much of the language used is mandated by regulations. This report provides valuable information about your drinking water, including information about its source and quality.

We are pleased to report that Bagdad's water met all drinking water standards set by the state and federal governments for 2022.

QUESTIONS ABOUT BAGDAD'S DRINKING WATER?

If you would like more information on the quality of your drinking water, have questions regarding this report, or require additional copies, please contact Christina M Grijalva, Environmental Scientist II, at 928-925-4860.



We want our valued customers to be informed about their water quality. If you would like to learn more about public participation or to attend any of our regularly scheduled meetings, please contact Roberto Camacho, Utilities Supervisor, at 928-925-2287 for additional opportunities and meeting dates and times.



PWS ID: AZ04-13011

DRINKING WATER SOURCES

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.

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

Our major water source is Francis Creek Springs located fifteen miles northwest of the town of Bagdad. This source, because of its approved encasements, is considered "groundwater" by the Arizona Department of Environmental Quality (ADEQ). We have six groundwater wells that provide additional water and range from 400 to 700 feet in depth. Four of the wells are located three to six miles northeast of Bagdad. The wells can be operated independently or together with the Francis Creek source to provide water to the town and mine. The remaining two wells are located one mile east of Sycamore Mobile Home Park. These wells can be operated independently or together with the Francis Creek source and the other wells to provide water to the mobile home park

SOURCE WATER ASSESSMENT

The Source Water Assessment (SWA) Program, developed and implemented by ADEQ under EPA guidance, was created to promote community awareness of water quality issues and to encourage the protection of drinking water sources at the community level. ADEQ gathers information on drinking water sources – including wells, surface water intakes, and springs –and evaluates the extent to which the water source is vulnerable to natural or man-made contamination from sources such as gas stations, landfills, dry cleaners, agriculture fields, wastewater treatment plants, and mining activities.

ADEQ has evaluated the source water areas in Yavapai County including the source waters for the FMBI drinking water system. The SWA for the FMBI drinking water system has been designated as low risk. A lowrisk designation indicates that most source water protection measures are either already



implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection.

Further source water assessment documentation can be obtained by contacting ADEQ, or visiting the Surface Water Monitoring and Assessment web page at www.azdeq.gov/programs/water-quality-programs/surface-water-monitoring-and-assessment.



DRINKING WATER CONTAMINANTS

To ensure that Bagdad's tap water is safe to drink, your water undergoes an assortment of tests for contaminants which are regulated by the EPA and ADEQ. These substances are discussed below:

Microbial Contaminants: Such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic Contaminants: Such as salts and metals that can be naturallyurban occurrina or result from stormwater runoff. industrial ٥r domestic wastewater discharges, oil production, mining, and qas 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:

Such as synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

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





VULNERABLE POPULATION

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. 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.

For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Aaencv (EPA) and the U.S. Centers for Disease guidelines (CDC) Control on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants visit the EPA Safe Drinking Water website at www.epa.gov/sdwa.



LEAD INFORMATIONAL STATEMENT

Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. The Freeport-McMoRan Bagdad Town 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 water for drinking or cooking. 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 www.epa.gov/safewater/lead.



OTHER WATER RESOUCES



Arizona Safe Drinking Water Database – View all regulated water quality sampling results of any drinking water system. https://azsdwis.azdeq.gov/DWW_EXT/

Water Use it Wisely – Arizona-based water conservation campaign with water saving tips, calculators, and games. https://wateruseitwisely.com/

Arizona Department of Environmental Quality – My Community – Find out what environmental issues are going on in your community and around the state. http://www.azdeq.gov/MyCommunity

DEFINITIONS AND ABBREVIATIONS

Action Level (AL): 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): 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.

Not Applicable (N/A): Sampling was not completed by regulation or was not required.

Not Detected (ND or <): Not detectable at reporting limit.

Revised Total Coliform Rule (RTCR): The revision to the 1989 Total Coliform Rule (TCR).

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

ppm: Parts per million or Milligrams per liter (mg/L) **ppb**: Parts per billion or Micrograms per liter (μg/L) **ppt**: Parts per trillion or Nanograms per liter (ng/L) **ppq**: Parts per quadrillion or Picograms per liter (pg/L)

ppm x 1000 = ppb ppb x 1000 = ppt ppt x 1000 = ppq

VIOLATION SUMMARY

Violation Type

Explanation, Health Affects.

Reporting

Submitted MRDL Report for Second Quarter 2 Days Late. No Health Effects. **Corrective Actions**

Submitted Report on July 12. Additional automated scheduling reminders were put into place to ensure future compliance.

YOUR DRINKING WATER DATA REGULATED CONTAMINANTS



The data in the attached tables are from water samples that have been analyzed by independent laboratories certified by the Arizona Department of Health Services. The analytic results shown on the following tables are for the period of January 1, 2022 through December 31, 2022 (or the last frequency test date within the last five years, in compliance with applicable regulations).

NOTE: The ADEQ Monitoring Assistance Program (MAP) tested for regulated volatile organic compounds (VOCs) in March 2020 and none were detected, unless otherwise noted. The ADEQ MAP tested for synthetic organic contaminants (SOCs) and Aroclor contaminants in March 2020 and none were detected.



EPDS # 2: SYCAMORE MOBILE HOME PARK TANK

Microbiological	MCL	MCLG	Number of Positive Samples	Likely Source of Contamination
E. Coli	Routine and repeat samples are total coliform-positive and either is E. coli positive, or system fails to take repeat samples following E. coli-positive routine sample or system fails to analyze total confirm-positive repeat sample for E. coli.	0	0	Human and animal fecal waste
Fecal Indicator (coliphage and enterococci)	0	0	0	Human and animal fecal waste

Disinfectants	MRDL	MRDLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Chlorine (ppm)	4	4	0.93	0.4-1.21	12/2022	Water additive used to control microbes

Disinfection By-Products	MCL	MCLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	60	N/A	<2.0	<2.0	07/2022	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	80	N/A	4.3	4.3	07/2022	Byproduct of drinking water disinfection

Lead & Copper	Action Level (AL)	Action Level Goal	90 th Percentile Value	Number of Homes Greater than AL	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	1.3	1.3	0.3	0	07/2021	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	15	0	<5	0	07/2021	Corrosion of household plumbing systems; erosion of natural deposits

Inorganic Chemicals (IOC)	MCL	MCLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Arsenic ¹ (ppb)	10	0	5.4	3.5-7.1	12/2022	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.046	0.046	03/2020	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	2.7	2.7	03/2020	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.28	0.28	03/2020	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	1.2	1.2	08/2022	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	N/A	N/A	19	19	03/2020	Erosion of natural deposits

¹ While your drinking water meets EPA's standard 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 effect 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.

EPDS # 3 FRANCIS CREEK CHLORINATOR POST CHLORINATION

Microbiological	MCL	MCLG	Number of Positive Samples	Likely Source of Contamination
E. Coli	Routine and repeat samples are total coliform-positive and either is E. coli positive or system fails to take repeat samples following E. coli-positive routine sample or system fails to analyze total confirm-positive repeat sample for E. coli.	0	0	Human and animal fecal waste
Fecal Indicator (coliphage and enterococci)	0	0	0	Human and animal fecal waste

Disinfectants	MRDL	MRDLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Chlorine (ppm)	4	4	0.98	0.5-1.4	12/2022	Water additive used to control microbes

Disinfection By-Products	MCL	MCLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	60	N/A	<2.0	<2.0	07/2022	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	80	N/A	5.2	5.2	07/2022	Byproduct of drinking water disinfection

Lead & Copper	Action Level (AL)	Action Level Goal	90 th Percentile Value	Number of Homes Greater than AL	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	1.3	1.3	0.3	0	07/2021	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	15	0	<5	0	07/2021	Corrosion of household plumbing systems; erosion of natural deposits

Inorganic Chemicals (IOC)	MCL	MCLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Arsenic ¹ (ppb)	10	0	6.6	5.9-8.4	12/2022	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.048	0.048	03/2020	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	1.3	1.3	03/2020	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.27	0.27	03/2020	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	1.2	1.2	08/2022	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	N/A	N/A	18	18	07/2021	Erosion of natural deposits

¹ While your drinking water meets EPA's standard 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 effect 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.

EPDS # 4: TUNGSTONA RO PLANT POST CHLORINATION

Microbiological	MCL	MCLG	Number of Positive Samples	Likely Source of Contamination
E. Coli	Routine and repeat samples are total coliform-positive and either is E. coli positive or system fails to take repeat samples following E. coli-positive routine sample or system fails to analyze total confirm-positive repeat sample for E. coli.	0	0	Human and animal fecal waste
Fecal Indicator (coliphage and enterococci)	0	0	0	Human and animal fecal waste

Disinfectants	MRDL	MRDLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Chlorine (ppm)	4	4	0.98	0.5-1.4	12/2022	Water additive used to control microbes
Disinfection By-Products	MCL	MCLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Disinfection By-Products Haloacetic Acids (HAA5) (ppb)	MCL 60	MCLG N/A	Running Annual Average <2.0	Range of All Samples (Low-High) <2.0	Sample Month & Year 07/2022	Likely Source of Contamination Byproduct of drinking water disinfection

Lead & Copper	Action Level (AL)	Action Level Goal	90 th Percentile Value	Number of Homes Greater than AL	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	1.3	1.3	0.3	0	07/2021	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	15	0	<5	0	07/2021	Corrosion of household plumbing systems; erosion of natural deposits

Inorganic Chemicals (IOC)	MCL	MCLG	Running Annual Average	Range of All Samples (Low-High)	Sample Month & Year	Likely Source of Contamination
Arsenic ¹ (ppb)	10	0	3.1	<1-7.8	12/2022	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	2	2	<0.002	<0.002	03/2020	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	<1	<1	03/2020	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.095	0.095	03/2020	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	0.22	0.22	08/2022	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	N/A	N/A	10	10	07/2021	Erosion of natural deposits