

Morenci Water & Electric

Morenci PWS ID# AZ04-06-003

2023 CONSUMER CONFIDENCE REPORT

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

Morenci Water & Electric (MWE) 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 U.S. 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.

If you would like more information on the quality of your drinking water, have questions regarding this report, or require additional copies, please contact MWE at 928-865-2229. MWE recommends that customers serving more than one housing unit post a copy of this report in a conspicuous place. We are pleased to report that Morenci's water meets or exceeds all drinking water standards set by the state and federal governments for 2023.

Information About Your 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.

Morenci's water source is surface water and is obtained from Eagle Creek located eight miles west of Morenci.

To ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain constituents in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for constituents in bottled water, which must provide the same protection for public health.

Contaminants that may be present in source water include the following:

- 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 that 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 can be the result of oil and gas production and mining activities.

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 1-800-426-4791. 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 and the U.S. Centers for Disease Control (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.

Source Water Assessment:

The Source Water Assessment (SWA) Program, developed and implemented by the Arizona Department of Environmental Quality (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 Greenlee County including the source waters for the Morenci drinking water system. The SWA for the Morenci drinking water system has been designated as a low risk.

The complete SWA report is available for inspection at the ADEQ, 1110 W. Washington, Phoenix, Arizona 85007, between the hours of 8:00 am and 5:00 pm. Further source water assessment documentation can be obtained by visiting ADEQ's Source Water Assessment Protection Unit website at: www.azdeq.gov/enviro/water/dw/swap.html.

Definitions

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.

Minimum Reporting Limit (MRL): The smallest measured concentration of a substance that can be reliably measured by a given analytical method

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

Level 1 Assessment: A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in the water system

Level 2 Assessment: 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 the water system on multiple occasions

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

Millirems per year (MREM): A measure of radiation absorbed by the body

Not Applicable (NA): Sampling was not completed by regulation or was not required

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

Nephelometric Turbidity Units (NTU): A measure of water clarity

Million fibers per liter (MFL)

are set as close to the MCLGs as feasible using the best available treatment technology.

Picocuries per liter (pCi/L): Measure of the radioactivity in 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)

Water Quality Data:

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.

Surface Water Treatment Rule	TT Violation Y or N	Highest Level Detected	% Range (Low-High)	TT	MCLG	Sample Month /Year	Likely Source of Contamination
Total Organic Carbon ¹ (mg/L) If Conventional Filtration	Y	4.03	0.51 – 4.03	TT	0	2023	Naturally Present in the Environment
Turbidity ² (NTU), surface water only	N	0.287	0.088 – 0.287	TT	0	2023	Soil Runoff
Disinfectants	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MRDL	MRDLG	Sample Month/Year	Likely Source of Contamination
Chlorine (ppm)	N	0.78	0.47 – 1.31	4	4	2023	Water additive used to control microbes
Disinfection By-Products	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MCL	MCLG	Sample Month/Year	Likely Source of contamination
Haloacetic Acids (HAA5) (ppb)	N	24.6	15-62	60	NA	2023	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	37	34 - 84	80	NA	2023	Byproduct of drinking water disinfection
Lead & Copper (ppm)	Violation Y or N	90 th Percentile	Number of Samples Exceeds AL	AL	MCLG	Sample Month/Year	Likely Source of Contamination
Copper (ppm)	N	0.1	0	1.3	1.3	9/2021	Corrosion of household plumbing systems; erosion of natural deposits

Lead (ppb)	N	0.63	0	15	0	9/2021	Corrosion of household plumbing systems; erosion of natural deposits
Inorganic Chemicals (IOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Number of Samples Exceeds AL	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Arsenic ¹ (ppb)	N	1.6	0	10	0	1/2021	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.015	0	2	2	1/2021	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	N	0.58	0	4	4	1/2021	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Violation Summary (for MCL, AL, TT, of Monitoring & Reporting Requirement)

Violation Type	Explanation, Health Effects	Time Period	Corrective Actions
Late reporting	MRDL quarterly report to ADEQ submitted late.	June 2023	Resolved- Report was submitted
Late reporting	RTCR monthly report to ADEQ submitted late	July 2023	Resolved- Report was submitted
Late reporting	Public Notice for TOCA Treatment technique violation	1Q2023	Resolved- Notice was submitted
TOCA Treatment technique	Did not meet annual average for removal ratio	1Q2023 & 2Q2023	Resolved- Filter media was replaced 6/16/2023.
Missed Monitoring	SWTR must continuously monitor filter water turbidity	1Q2023 & 2Q2023	Resolved- 6 new turbidity monitors installed 8/23/2023

NOTE: Data presented in the tables above are from the most recent testing done in accordance with applicable regulations. Some constituents are monitored less frequently than once per year because either their concentrations do not change frequently, or they are not likely to be detected. Therefore, some of the water quality testing data contained herein, although representative, may be more than one year old. The EPA requires monitoring of over 80 drinking water contaminants. Those listed above are the only contaminants detected in your drinking water. For a complete list of all contaminants monitored please contact ADEQ.

¹ **Total organic carbon (TOC)** has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THM) and haloacetic acids (HAA). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. We monitor it because it is a good indicator of the quality of water. High turbidity can hinder the effectiveness of disinfectants. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Arsenic is a mineral known to cause cancer in humans at high concentration and is linked to other health effects, such as skin damage and circulatory problems. If arsenic is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water and continues to research the health effects of low levels of arsenic."

Lead Informational Statement

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. MWE 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 at <http://www.epa.gov/safewater/lead>.