



Maricopa Mountain Domestic Water Improvement District Consumer Confidence Report for Calendar Year 2023

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

Public Water System ID Numbers		Public Water System Names	
AZ04-11087; AZ04-11322; AZ04-11108 and AZ04-11301		Maricopa Mountain DWID 1/American Realty & Mortgage; Maricopa Mountain DWID 2; Maricopa Mountain DWID 3; and Maricopa Mountain DWID 4.	
Contact Name and Title		Phone Number	E-mail Address
Nancy Criswell, Administrator		(520) 424-9646	admin@mmdwid.org
We want our customers to be informed about their water quality. If you would like to learn more about what you can do to help protect your drinking water sources, any questions about the annual drinking water quality report or to attend any of our meetings, please contact Maricopa Mountain DWID (MMDWID) at (520) 424-9646 for additional opportunity and meeting dates and times.			

Water System Information

Well #1 (System ID # 04-11087) & #2 (System ID # 04-11322), serves *POTABLE* water to the Hidden Valley area; and Well #3 (System ID # 04-11108) and #4 (No System ID #) serves *NON-POTABLE* water to the Hidden Valley area. The Hacienda Acres community is served by Well #1. **See map for all locations.**

All well sites are equipped with automatic chlorination systems to protect against bacteria. Additionally, Well #1 is equipped with an Arsenic Removal System (ARS). Both potable wells were tested according to Environmental Protection Agency (EPA) and Arizona State (ADEQ) drinking water health standards and guidelines. Both non-potable wells were also tested annually.

In 2023, we tested all wells for bacteria and other contaminants; bacteria test results were clear. Potable Well #2 exceeded the Nitrate trigger of 5.0 PPM; however, it did not exceed the MCL of 10.5 PPM. We are now testing Well #2 quarterly for Nitrates. Potable Well #1, which supplies Fill-stations 1, 1A and Hacienda Acres, exceeded the MCL for nitrates. Well #1 also has a history of exceeding the MCL for arsenic and is currently treated to remove the arsenic. We monitored Well #1 for both arsenic and nitrates quarterly. The media in the ARS and the two vessels were replaced in 2021. A new well was drilled at Site 1 that will resolve the nitrates and should be equipped this year. Until the quality issue is resolved with Well #1, drinking water is offered free of charge to active water users.

We tested the *non-potable*, irrigation only wells for contaminants. Well #3 exceeds the MCL for Nitrates. Well #4, also *non-potable*, irrigation only, is not an ADEQ approved water source and was never issued a public well system number (PWS). Well #4 exceeded the MCL for Fluoride and Arsenic. For these reasons, the two non-potable wells, #3 and #4, are posted as "Irrigation Use Only".

Your water source(s):	<p>Your water comes from wells sunk into an underground source of water called an Aquifer. Well #1, currently in service, is 1000 feet deep. A replacement well for this site was drilled in 2020 to a depth of 1400 feet and is expected to be placed in service in 2025. This replacement well will resolve the nitrate issue at this location but will still require arsenic treatment. Well #2 has two wells; one is approximately 500 feet and is not in service (too shallow); the operational well is 1000 feet in depth. Well #3 also has two wells, one is not in service and is 455 feet (also too shallow); the other is in service at 800 feet. Well #4 is approximately 850 feet in depth. An additional well, #5, was drilled in 2020 to a depth of 800'. This well is expected to be placed in service in 2025 to provide water to the Hacienda community and to supplement fill-station #2. This well will not meet the demand; a solution to the shortage is underway.</p> <p>The MMDWID owns all the wells and the land they sit on, except for Well #4, this well is owned by MMDWID but is on leased land. MMDWID restricts any activity that could contaminate these wells and fill-sites. MMDWID was not provided water by nor was water purchased from another source. Hacienda Acres customers were provided water from Well #1, PWS # AZ04-11-087. See Tables I & II for details.</p>
Drinking Water Sources	<p>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.</p> <p>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.</p>

Drinking Water Contaminants

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 naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides: Such as agriculture, urban storm water runoff, and residential uses that may come from a variety of sources.

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 Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines 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.

Definitions

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 was present.

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 was present.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water.

Maximum Contaminant Level Goal MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health.

Maximum Residual Disinfectant Level (MRDL): The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur.

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

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)

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 $\text{ppm} \times 1000 = \text{ppb}$

Picograms per liter (pg/L) $\text{ppb} \times 1000 = \text{ppt}$

$\text{ppt} \times 1000 = \text{ppq}$

Source Water Assessment

- Based on the information currently available on the hydrogeologic settings of and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the department has given a low risk designation for the degree to which this public water system drinking water source(s) are protected. A low risk 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.

Health Effects Information:

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. If coliform is found, then the system is responsible to look for potential problems in water treatment or distribution. When this occurs, the water system is required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. If *E. coli* bacteria is found, the water system is required to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. "High nitrate levels in drinking water can cause blue baby syndrome." Nitrate levels may rise quickly for short periods-of-time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

Fluoride in excess of the MCL over many years could cause bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of teeth, and occurs only in developing teeth before they erupt from the gums.

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.

Possible health effects of arsenic in drinking water?

According to a 1999 study by the National Academy of Sciences, arsenic in drinking water may cause bladder, lung and skin cancer, and may cause kidney and liver cancer. The study also found that arsenic harms the central and peripheral nervous systems, as well as heart and blood vessels, and causes serious skin problems. It also may cause birth defects and reproductive problems.

Can I buy a filter that will remove arsenic from my water?

Yes. You should purchase filters certified by NSF International (1-800-NSF-MARK or <http://www.nsf.org>) to remove arsenic (such as water distillation systems). While such certification is not necessarily a guarantee of safety, it is better than no certification at all. It is critically important that all filters be maintained and replaced at least as often as recommended by the manufacturer; otherwise they might make the problem worse.

I drink bottled water -- do I have to worry about arsenic?

Bottled water is not necessarily any safer than tap water. Often, it is nothing more than tap water that may or may not have been filtered. For more on bottled water, see <http://www.nrdc.org/water/drinking/nbw.asp> for the NRDC's 1999 report Bottled Water: Pure Drink or Pure Hype?

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. Maricopa Mountain DWID 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 (capture this water for your houseplants). 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 www.epa.gov/safewater/lead.

Water Conservation Tips, Facts and Resources:

Facts	<ul style="list-style-type: none"> According to the EPA, the average household loses more than 10,000 gallons of water each year through leaks. That's the same amount of water needed to wash 280 loads of laundry, take 600 showers or meet the average family's water needs for a month. Some water leaks are slow and difficult to detect, yet they add up quickly. A leaking toilet can waste over 6,000 gallons of water per month; that adds up to as much as 72,000 gallons per year.
Money-Saving Tips	<ul style="list-style-type: none"> Check your water hauling equipment for leaks and repair as needed. See Equipment Resources below. Perform a dye test to detect a leaky toilet: <ul style="list-style-type: none"> Lift the tank cover. Place a few drops of food coloring into the tank. Wait 15 minutes. DO NOT USE THE TOILET DURING THIS TEST. If the color appears in the toilet bowl, you have a leak. Replace your toilet flapper every 3-5 years, as they are prone to warping and leaking.
Resources:	<ul style="list-style-type: none"> Smart Home Water Guide – https://www.smarthomewaterguide.org/ Arizona Desert Landscape guides - https://www.amwua.org/what-you-can-do/landscape-and-garden For additional water conservation information, visit www.azwater.gov/conservation Standpipe Equipment Resources: (Water tanks, hoses, fittings) <ul style="list-style-type: none"> AG Spray Equipment in Tempe (480) 705-8047 NAPA in Stanfield (520) 424-3321 Grainger in Tempe (800) 472-4643

Water Quality Data

Unless otherwise indicated, the tables list all of the contaminants that we detected in the water during the 2023 calendar year. The presence of contaminants in the water does not necessarily indicate the water poses a health risk. The State of Arizona and the EPA requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination.

Table I: Potable Fill-Site Water Quality Data: System ID #'s AZ04-11-087 and AZ04-11-322

			Maricopa Mountain DWID 1 (MMDWID1) Site 1: Hwy 347 & Carefree Place Site 1A: 727 N Amarillo Valley Rd Hacienda Acres (PWS AZ04-11301) PWS # AZ04-11-087			Maricopa Mountain DWID 2 (MMDWID2) Site 2: Miller Rd & Sage St PWS # AZ04-11-322			
Microbiological	MCL	MCLG	Violation Y or N	Number of Samples Present <u>OR</u> Highest Level Detected	Absent (A) or Present (P) <u>OR</u> Range of All Samples (L-H)	Violation Y or N	Number of Samples Present <u>OR</u> Highest Level Detected	Absent (A) or Present (P) <u>OR</u> Range of All Samples (L-H)	Likely Source of Contamination
Total Coliform Bacteria (System takes 1 monthly samples per site)	0	0	N	0	A	N	0	A	Naturally Present in Environment
Disinfectants	MCL	MCLG	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	Likely Source of Contamination
Chlorine (ppm)	MRD L = 4	MRDL G = 4	N	1.36	1.21 – 1.58	N	1.36	1.26 – 1.45	Water additive used to control microbes

Disinfection By-Products	MCL	MCLG	Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	Likely Source of Contamination
Haloacetic Acids (ppb) (HAA5)	60	n/a	N	<2	<2	N	<2	<2	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (TTHM)	80	n/a	N	7.9	7.9	N	1.6	1.6	Byproduct of drinking water disinfection
Lead & Copper	AL	ALG	Violation Y or N	90 th Percentile <u>AND</u> Number of Samples Over the AL	Range of All Samples (L-H)	Violation Y or N	90 th Percentile <u>AND</u> # Samples Over the AL	Range of All Samples (L-H)	Likely Source of Contamination
Copper (ppm) 2021 Data	AL = 1.3	ALG = 1.3	N	90 th Percentile = 0.01	<0.00-0.019	N	90 th Percentile = 0.009	<0.00-0.075	Corrosion of household plumbing; erosion of natural deposits
Lead (ppb) 2021 Data	AL = 15	0	N	90 th Percentile = <5.0	ND	N	90 th Percentile = <5.0	ND	Corrosion of household plumbing.
Radionuclides	MCL	MCLG	Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	Likely Source of Contamination
Combined Radium 226 & 228 (pCi/L) 2021 Data: MMDWID1 2018 Data: MMDWID2	5	0	N	<1.0	<1.0	N	<0.4	<0.4	Erosion of natural deposits
Combined Uranium (UG/L) 2018 Data: MMDWID1	30		N	20	20				Erosion of natural deposits
Alpha emitters Excl Radon (pCi/L) 2021 Data: MMDWID1 2018 Data: MMDWID2	15	0	N	<3.0	<3.0	N	14	14	Erosion of natural deposits
Inorganic Chemicals (IOC)	MCL	MCLG	Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	Likely Source of Contamination
Arsenic (ppb) 2023 Data: MMDWID1 2021 Data: MMDWID2	10	0	N	1.3	<0.01-1.6	N	7.3	7.3	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm) 2021 Data: MMDWID1&2	2	2	N	.022	.022	N	0.084	0.084	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb) 2021 Data: MMDWID1&2	100	100	N	ND	ND	N	8.0	8.0	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm) 2021 Data: MMDWID1&2	4	4	N	3.0	3.0	N	0.8	0.81-0.86	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Nitrate (ppm)	10	10	Y	13	12.0 – 12.8	N	6.0	4.4 - 5.7	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm) 2021 Data: MMDWID1&2			N	210	210	N	83	83	Erosion of natural deposits

Unregulated	MCL	Violation Y or N	Highest Level Detected	Range of All Samples (L-H)	Violation Y or N	Highest Level Detected	Range of All Sample s (L-H)	Likely Source of Contamination
PFAS MMDWID1&2		N/A	ND	ND	N/A	ND	ND	Runoff from fire training facilities, military areas, airports, manufacturing facilities, and some waste disposal sites.

Table II: Potable Hacienda Acres / American Realty & Mortgage Water Quality Data: System ID #'s AZ04-11-301

American Realty & Mortgage (Hacienda Acres) Hacienda Acres (PWS AZ04-11301) Water provided from MMDWID 1 PWS # AZ04-11-087						
Microbiological	MCL	MCLG	Violation Y or N	Number of Samples Present <u>OR</u> Highest Level Detected	Absent (A) or Present (P) <u>OR</u> Range of All Samples (L-H)	Likely Source of Contamination
Total Coliform Bacteria (System takes 1 monthly sample)	0	0	N	0	A	Naturally Present in Environment
Disinfectants	MCL	MCLG	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	Likely Source of Contamination
Chlorine (ppm)	MRD L = 4	MRDL G = 4	N	1.18	0.98 – 1.39	Water additive used to control microbes
Disinfection By-Products	MCL	MCLG	Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	Likely Source of Contamination
Haloacetic Acids (ppb) (HAA5) 2021 Data: ARMC	60	n/a	N	<2	<2	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (TTHM) 2021 Data: ARMC	80	n/a	N	0.5	0.5	Byproduct of drinking water disinfection
Lead & Copper	AL	ALG	Violation Y or N	90 th Percentile <u>AND</u> Number of Samples Over the AL	Range of All Samples (L-H)	Likely Source of Contamination
Copper (ppm) 2021 Data: ARMC	AL = 1.3	ALG = 1.3	N	90 th Percentile = 0.03	0.0064-0.032	Corrosion of household plumbing; erosion of natural deposits
Lead (ppb) 2021 Data: ARMC	AL = 15	0	N	90 th Percentile = <5.0	ND	Corrosion of household plumbing.

Table III: Non-Potable, Irrigation Use Only Fill-Site Water Quality Data: System ID #'s AZ04-11-108; Well 4 (No PWS #).

			Maricopa Mountain DWID 3 Site 3: Wildwood & Warren Road PWS # AZ04-11-108 <u>NON-POTABLE</u>			Maricopa Mountain DWID 4 Site 4: Arabian Rd., South of Organ Pipe Rd. No PWS # <u>NOT an ADEQ APPROVED WELL</u> <u>NON-POTABLE</u>			
Microbiological (System takes 1 annual sample)	MCL	MCLG	Exceeds MCL Y or N	Number of Samples Present <u>OR</u> Highest Level Detected	Absent (A) or Present (P) <u>OR</u> Range of All Samples (L-H)	Exceeds MCL Y or N	Number of Samples Present <u>OR</u> Highest Level Detected	Absent (A) or Present (P) <u>OR</u> Range of All Samples (L-H)	Likely Source of Contamination
Total Coliform Bacteria	0	0	N	0	A	N	0	A	Naturally Present in Environment
Inorganic Chemicals (IOC)	MCL	MCLG	Exceeds MCL Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level	Range of All Samples (L-H)	Exceeds MCL Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level	Range of All Samples (L-H)	Likely Source of Contamination
Arsenic (ppb)	10	0	N	3.4	3.4	Y	28	28	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Fluoride (ppm)	4	4	N	3.2	3.2	Y	8.55	8.55	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	Y	12.8	12.8	N	7.88	7.88	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Violation Summary &/or ADEQ Consent Orders

Type / Description	Compliance Period	Corrective Actions taken by PWS
Well # 1, System ID # AZ04-11-087, exceeded the MCL for nitrates. This well is operating under an ADEQ Consent Order to correct the problem and monitors quarterly for Nitrates.	Violation: Jan. 01, 2023 – Dec. 31, 2023.	Obtained funding and the engineering to replace the well. An alternative drinking water source is offered until the new well is operational. The new well is expected to be in service by 2025. We monitor quarterly.

[illegible]

Office & 1A: 727 North Amarillo Valley Road
1: 44792 West Carefree Place
2: 55826 West Miller Road
3: 15 South Warren Road
4: 4098 North Arabian Road
5: SW corner of Miller Road & Deer Trail